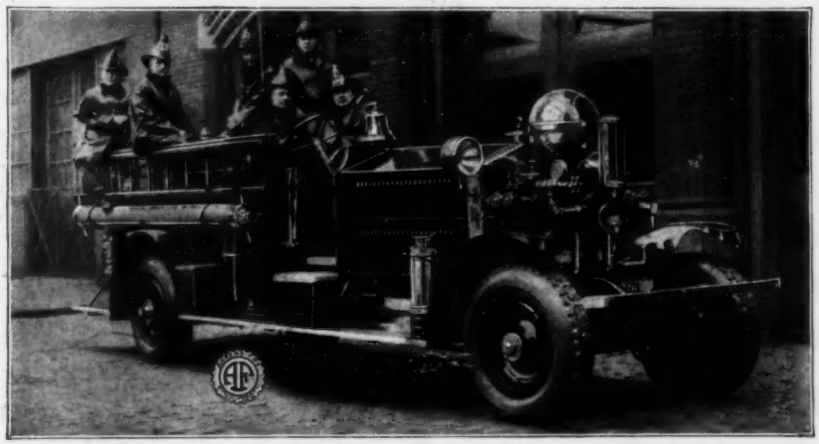
FIRE ENGINEERING

A Consolidation of
FIRE AND WATER ENGINEERING *and* THE FIRE ENGINEER

OCTOBER 5, 1927



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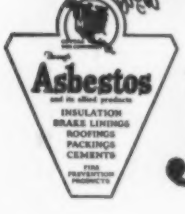

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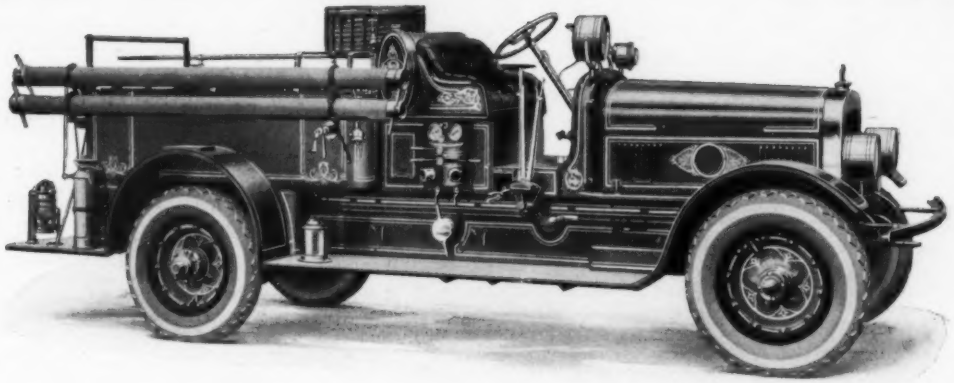

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The Journal of the Fire Protection Profession Since 1877

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FIRE ENGINEERING

A consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER

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"If we'd 'ad one," shouted a man in the audience, "you'd 'ave got it long before this."

¶ Well, we hardly think the readers of FIRE ENGINEERING have any desire to favor us with eggs or any other form of criticism. At least we hope not!

¶ As a matter of fact, we have been hearing some mighty fine things about the high esteem in which this magazine is held, both by its subscribers and by its advertisers. We seem to have real friends,—and lots of 'em!

¶ We are doing our best to give you a really interesting and practical publication; one that will do much to advance the cause of fire prevention; but if we ever do make a slip in our performance, we certainly want you to call it to our attention. Say it with flowers if possible; eggs if you must; but, anyway, say it!

The Publishers

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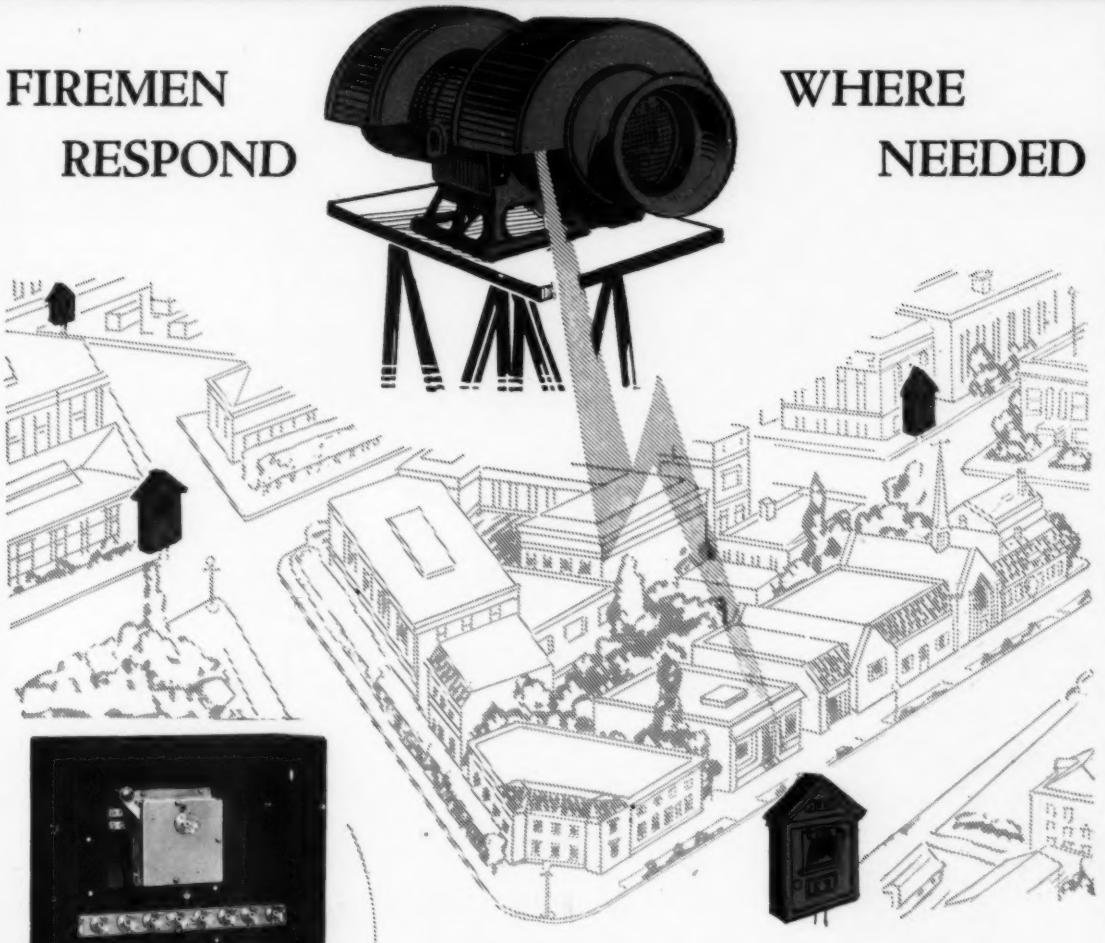
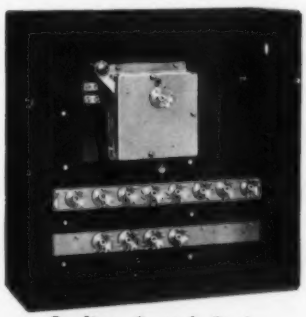
FIREMEN RESPOND WHERE NEEDED





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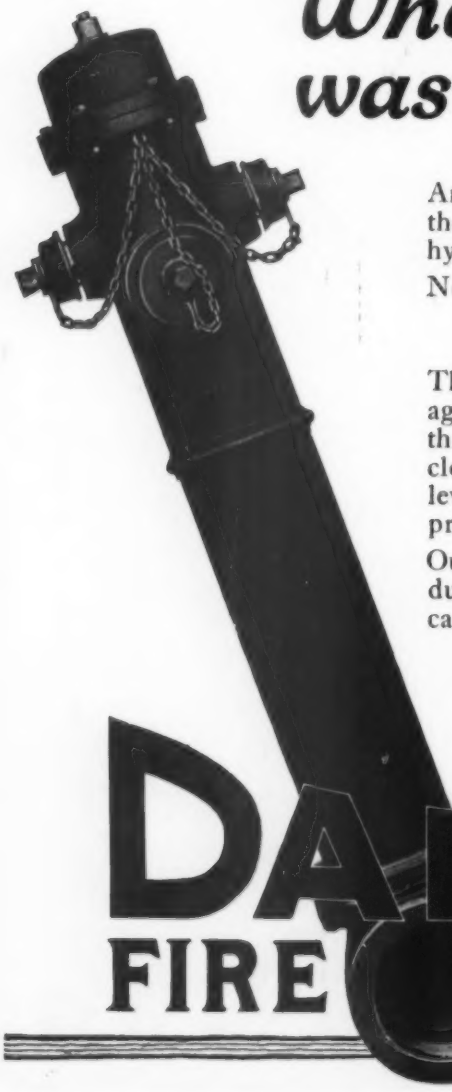

And the fire department checked up their damages they found that solid earth had given, but the hydrant had withstood the shock.

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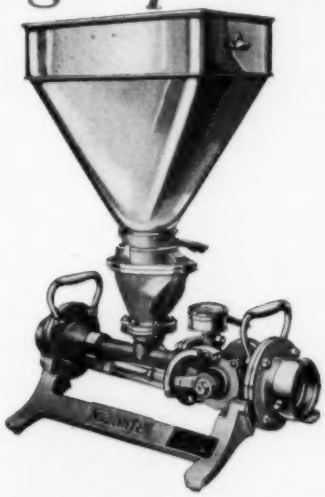

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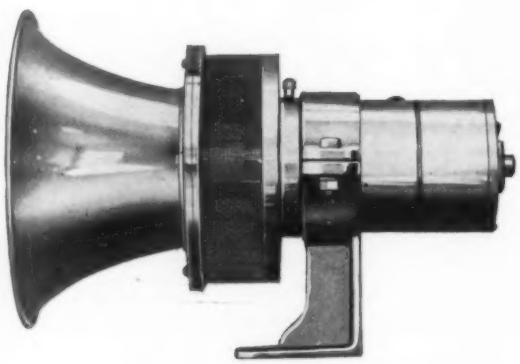

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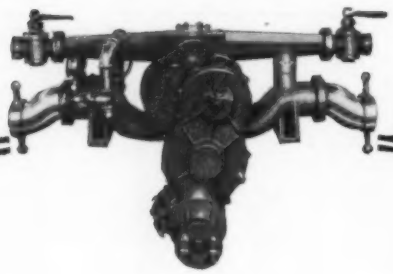

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FIRE ENGINEERING

(A Consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER)

The Journal of the Fire Protection Profession

VOLUME LXXX | OCTOBER 5, 1927 | NUMBER 20

Wooden Shingles--Conflagration Breeders

Absolute Prohibition of Their Use as Roof Covering the Only Safe Plan—How Final Abolition Can be Accomplished

By CHIEF SELDEN R. ALLEN, Fire Department, Brookline, Mass.*

IT seems incredible that anyone would oppose the prohibition by law of the inflammable wooden shingle as a roof covering, and yet, so strong is the power in certain sections of the country of the interests which would suffer commercially from such inhibition, that it seems almost impossible to pass legislation to bring about this much desired result. Chief Allen points out some important reasons why the wooden shingle should be banished as a roof covering:

Chief Selden R. Allen,
Brookline, Mass.

Hazard of the Wood Shingle

Year after year, more and more general recognition is being accorded to the hazard of the wooden shingle by the people throughout this entire country, due to the publicity it forces upon the public by the part it plays in our conflagrations and as a destroyer of homes.

Just around the corner in every American city and town there lurks, at the present time, a conflagration and the chief who thinks otherwise is dwelling in a fool's paradise and unless fate is kind he is due for a rude awakening, no matter how efficient his department may be.

Do you suppose the Chief of Chelsea, Mass., would have taken you seriously had you walked into his office on the morning of April 12, 1908 and told him that before the rising of the sun an another day, 18 lives, 3,500 buildings and $12,000,000 would be destroyed by fire in his city? What would have been the reply of the Chief of Berkeley, Calif., to a similar prophecy on the morning of September 17, 1923?

Their replies would have been similar to that of most of us: They would have pointed, and justly so, to their efficient department, their adequate water supply, their close proximity to plenty of assistance from other efficient departments and they would have dismissed the entire matter with a deprecatory smile.

Under normal conditions this sort of reasoning would be correct and as far as their mercantile and manufacturing districts were concerned they probably would be safe or reasonably so.

Conflagrations Thrive Upon Abnormal Conditions

But conflagrations thrive on abnormal conditions, such as long periods of dry weather, high winds sufficiently strong to carry burning embers a long distance, water mains too small to stand the drain of the tremendous number of fire streams necessary to cover a large area. Add to these conditions the real major cause of all of our conflagrations (as proved by history beyond a shadow of a doubt) the wood shingles which cover thousands of the homes of our people and what man would have the temerity to declare that his city or town could or would not meet the fate that befell Jacksonville, Fla., in 1901; Fort Worth, Texas, in 1909; Salem, Mass., in 1914, and Newport, Ark., in 1926, where 264 of the 270 buildings destroyed had wood shingle roofs, and many other conflagrations.

The sad part of these conflagrations of the past has been not merely the financial loss, but it has been in the main a loss of homes into which men had put their savings of many years and for which they had pledged their future. In a very large number of cases the insurance carried fell far short of the cost of replacement and ruin for countless families has been the inevitable result.

What Roof Fires Have Cost the Property Owners

The loss caused by fire on roofs (and the wood shingle looms up as the greatest offender) was $15,931,342 in 1923, $15,052,140 in 1924, and $14,680,187 in 1925, an average loss of approximately $15,000,000.

In addition to this loss the owner of every building having a roof covered with combustible roofing has been paying an extra tax for that hazard in his premium and he will continue to until he re-roofs with fireproof material.

The city or town in which his building is located, if without a law prohibitng inflammable roof covering, also pays a higher rate because of that fact and the terms city or town simply means the inhabitants thereof.

Elimination of Hazard a Matter of Gradual Progress

The elimination of this super hazard should and must be a matter of gradual progress. Any legislation that seeks to accomplish this in any other manner would be illogical and would surely meet with defeat.

The use of the wood shingle up to a comparatively short time ago was largely a matter of necessity, for we were confronted with the alternative of using the wood shingle with its low cost of production and labor in laying or the adoption of slate with its high cost for material and labor, which made its use almost prohibitive in many parts of the country.

Non-Combustible Shingle Changes Aspect of Case

But the introduction of the non-combustible shingle or other roof covering of a similar nature has entirely changed the aspect of the case. They passed the experimental stage long ago and they are proving every day that they are both fire resisting and economical.

Cost About the Same as Wood

Unlike slate, they are light in weight and roof rafters need no strengthening. The cost of the best grade of asbestos shingles and the best grade of wood shingles in the New England market show that they both run about the same per square for stock and the cost of laying is slightly lower for the larger sizes of the fire resisting shingles. Prices for both stock and labor for both types would very naturally vary in different parts of the country, but the added factor of safety that accompanies the fire resisting shingles is beyond computation

* From a paper read before the annual convention of the International Association of Fire Chiefs at Portland, Ore.

A Striking Example of the Results Arising from the Use of Wooden Shingles as a Roof Covering. Note the Dwelling Roofed with Fire Resistant Material Untouched by the Flames

and this fact above all others should appeal to the farmers and others who are a long distance from fire apparatus and an adequate water supply.

The application of asbestos shingles over old wood shingles is not the ideal method and considerable difficulty has been experienced by chiefs in ventilating where a fire starts on the inside and it is necessary to open up the roof, but in view of the fact that nine out of every ten fires in a roof start on the outside even this method is a distinct advantage over the old wood shingle and should not be entirely prohibited in isolated sections. It gives the owner whose means are limited at least 90% roof protection. The manufacturers themselves agree that the best method is to remove the old shingles entirely.

How to Bring About Adoption of Fire Resistant Shingles

The question now arises as to the best method to adopt to bring about this desired change and the writer believes that where building laws exist there should be incorporated in these laws an article not less restrictive than the following:

Roof Coverings.—A—Materials.—All buildings, except as given below, shall have roof coverings of approved standard quality such as brick, concrete, tile or slate, of highest grade tin roofing, or asbestos shingles, or of built up roofing felt with gravel or slag surface, or of built up asbestos roofing, or other roofings of like grade which would rank as Class A or B of the Underwriters Laboratories or of such equivalent materials as the commissioner may authorize.

Exceptions: 1 Dwellings.
2 Frame buildings.
3 Buildings not exceeding two stories or thirty feet in height and two thousand five hundred square feet in area, and not used for factories, warehouses, or mercantile purposes.

B. Quality.—The roofing for all dwellings and other structures exempted in paragraph A shall be of materials of a grade not lower than Class C of the Underwriters Laboratories or such equivalent materials as the commissioner may authorize.

C. Insulation.—A layer of roofing felt at least one-sixteenth of an inch thick shall be placed between metal roofing and the supporting woodwork.

D. Repairs to Shingle Roofs.—This section shall not be construed to prohibit the repairing of a wooden shingle roof, provided the building is not increased in height and that not more than ten per cent of the roof is repaired with wooden shingles in one year.

E. Penalty.—Any person violating these regulations shall be punished by a fine of not more than one hundred dollars to be paid into the treasury of the city or town.

The law suggested does not work a hardship on the owner of limited means and eventually brings about the desired result. Where local buliding laws do not exist a similar mandatory law should be passed by the State Legislature.

Astounding Opposition to Wooden Shingle Prohibition

The astounding thing about this hazard is not that it exists but that many oppose its extermination. The main opposition comes from the lumbermen who manufacture wood shingles and in a few instances from speculative builders. In a few states these interests are sufficiently powerful to defeat legislation intended solely to safeguard life and property and remove forever this undisputed breeder of conflagrations.

Their interest in the matter is purely a commercial one and shows an utter disregard for the lives and property of the public. They rank with those who would lay our people low with the scourge of small pox, typhoid and similar diseases by opposing preventive inoculation.

Wave of Fire Prevention Constantly Gains Momentum

But there is a wave of fire prevention gaining momentum every day throughout this country that no body of men can stem or turn aside.

Let us hope that in the very near future the people will awaken to the fact that the cost of every fire or conflagration is paid for out of their own pockets and that the insurance companies are simply collecting and disbursing agencies and do not get their money out of a mysterious somewhere.

The accompanying illustration is a most convincing argument in favor of the fire-proof roof, as it clearly shows the effect of a conflagration on the buildings covered with the wood shingles, and close by one stands without a dollar's damage, due to the incombustible roof covering.

Colorado Firemen Hold Convention

The eleventh annual convention and tournament of the Colorado State Firemen's Association was held in Longmont on September 5-7. A number of interesting talks were given by prominent speakers.

A resolution was introduced to do away with the tournament feature of the convention and to introduce some events with motorized fire apparatus. This did not meet with the approval of the volunteer fire departments and it was amended afterwards to read that each year some motor event be added. This plan was considered favorable.

Members of the Denver fire department under the direction of Captain W. H. Martin, gave an interesting demonstration of ladder work. A five story skeleton building was erected on the fair grounds where the convention was held, and fire houses were placed near by. At a signal, the companies responded to the "burning" building and demonstrated their ability in life saving work and their dexterity with rope and ladders.

Four Companies Added in New York

Four new fire companies, three engines and one hook and ladder have been added to the New York City department, in the suburban sections of Brooklyn and Queens counties. The new companies, Engines 309, 310, 311 and Hook & Ladder 158 were formally placed in service by Commissioner Dorman and Chief Kenlon on Friday September 16th.

The engines are American-La France and the hook and ladder is a City Service truck.

Coincident with the placing in service of Engine Co. 311 and Hook and Ladder Co. 158, there was disbanded four companies of the old volunteer fire service. They were Springfield Chemical Co.; Springfield Hook & Ladder Co.; Rosedale Chemical Co. and Rosedale Engine Co. The vamps responded to a special signal transmitted by Fire Commissioner Dorman. It was their farewell.

What Program for Fire Prevention Week?

Suggestions of Ways to Effectively Observe This Week That Is Designed to Cut Down Fire Losses—Goal of "No Fire Week"

EACH community throughout the land should lay plans for an appropriate observance of fire prevention week and make it the starting point for a program to continue throughout the year.

In this way President Calvin Coolidge, stressed the importance of proper fire prevention programs, in his proclamation in which he sets aside the week of October 9 to 15 as Fire Prevention Week.

With all the means that the fire chief has available for furthering the object of this week, and possibly even selfishly further the needs of his local department, there can be no logical excuse for not planning and carrying out some program to drive home the fire prevention message to the residents.

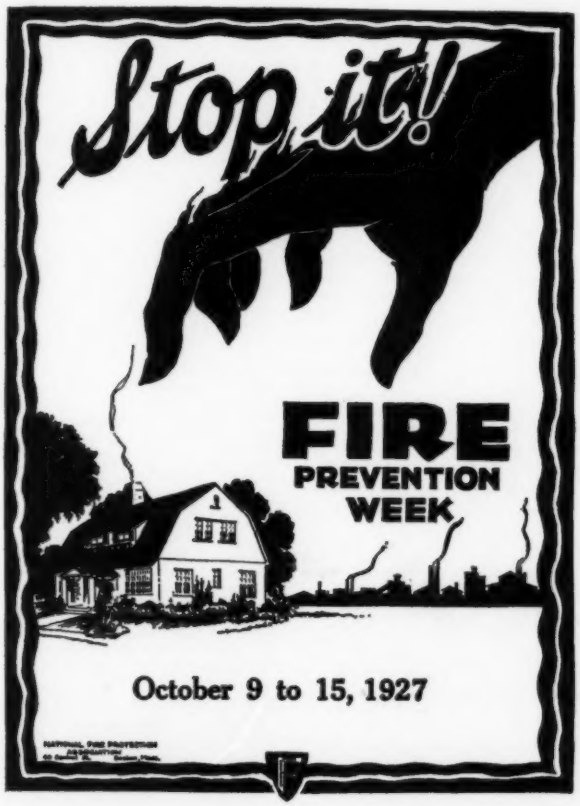
Slogan of "No Fire Week"

Leaders in the fire waste reduction movement are looking forward for the time when there will not be any fires. Of course, such a condition is too idealistic, but last year, many municipalities have had the good fortune through their educational campaigns, to have a "no fire week." It is a goal that many cities and towns are striving for this year: that which one city has done can easily be duplicated by others.

Possibly Ways of Assistance

Perhaps before planning something definite it would be well to outline just what aid could be expected from civic organizations, individuals and others in carrying out a program that will make the municipality a better place in which to live.

For the distribution of literature, there are the school children, Boy Scouts, Girl Scouts or Camp Fire Girls. Stickers may be placed on packages by local merchants and folders included with the merchandise sold by them.



Speakers should be supplied to the meetings of the Rotary, Kiwanis or Lions clubs, Chamber of Commerce, luncheon clubs, fraternal organizations or women's clubs. Firemen should be available for this work.

Demonstrations could be given by the fire department at some busy point in the city and should be properly advertised to get the most good. Calls could be made to the homes and schools to show the people and children how to properly turn in a fire alarm.

The Chamber of Commerce should be placed in charge of all publicity work. Stories should be furnished daily to the local press, if there is a daily newspaper, on various phases of fire prevention work.

A corps of 4-minute men should give talks in all theatres each night of the week.

Members of the ministry should be asked to deliver fire prevention sermons on the Sunday of Fire Prevention Week.

Inspections should be made to show the people how to reduce the fire hazard in the home, store or factory.

Work Centers About Firemen

Nothing is quite as effective as the appearance of a fireman in uniform. The message that he has to deliver is considered as coming from one who is qualified to speak on such matters.

The chief should, as a first step, organize a speakers' bureau to supply officers and firemen to address meetings and gatherings.

Firemen should be assigned to speak before the various classes in the public and parochial schools placing stress upon the proper manner in which to turn in a fire alarm using a dummy fire alarm box for demonstration purposes. Some places have even fitted up a truck with fire department exhibits and in charge of a fire department speaker. Talks will be given from the truck at various points in the city or near factories during the noon hour. Luncheon clubs that are always on the watch for available people to address their noon-day meetings, will be pleased to have a member from the fire department speakers bureau at their gatherings. Four-minute talks given before theatre crowds will reach people that it would be impossible to get in contact with by other means.

Newspaper Work

Since the facilities of the fire department for clerical and detail work are limited, the Chamber of Commerce should be asked to take charge of the newspaper publicity work with the understanding that the fire department would supply the facts and information for the necessary copy.

Newspapers are always pleased to co-operate with a movement that is designed for the public's welfare. Propaganda stories could be sent to the papers every day emphasizing the need for carefulness in order to reduce the chances of fire. One article may tell of the need for cleaning the chimney, flues and furnace before starting the fire for the fall. Another may stress the importance of having the electrical work done by competent electricians and not by some handy man about the house. There will be no scarcity of material.

Editors should be asked to assign reporters to cover all of the important fire prevention meetings and demonstrations.

Enlisting the Aid of Boys

Have you ever noticed the large number of boys that are always peering into the fire stations through the open doors? It is due to a boy's worship for a uniform and a desire to play the part of a hero. Why not utilize this?

A modern idea is to organize boys fire departments along the plan of the city's organization. The youngsters have their officers from the chief down, and where there are sufficient funds to finance it, they are even supplied with badges. But that is the lesser part of the plan.

Meetings are held in the fire stations during the day and the boys are instructed in the use of some of the fire department tools and equipment; they are taught what each tool is designed for; how to hold back crowds at fires and how to aid the firemen in their work. Before the week is up, each boy is converted into an enthusiastic fire preventionist with very little effort. As they grow up, they will always retain the main

points of what they learned as junior firemen, while receiving instruction in the fire stations.

Essay Contests Are Effective

At a very moderate cost for prizes, the city can arrange essay contests in the schools on fire prevention subjects. The teachers are asked to co-operate by explaining to the children the reason for fire prevention week, the large amount of property that is destroyed each year, the hundreds of lives that are lost and the ways in which fires may be prevented. The children are supplied with all the necessary data from which to construct prize essays.

Some of the prominent city officials or residents should be asked to select the winners. The prizes should be awarded at some public function at the end of the week and the prize essays should be published in the local papers as an additional reward.

In one of the public schools in Sacramento, Cal., a Match Can Club was organized and the idea can be very well copied by other schools.

The purpose of the club was to prevent any fires that might be caused by the careless disposition of matches; to form the habit of putting matches into proper containers and for the club to supply the cans to those asking for them. The club had regularly elected officers who visited every other class in the school and gave a short talk on the danger of leaving matches lying around.

Cans of about the type that are used as coffee containers were collected and redistributed to those asking for them. The request for cans greatly exceeded the wildest hopes of the officers.

Farms Should Be Considered

Cities that are surrounded by a large rural farming population would do well to consider the farmer who comes to town on Saturday for his weekly purchases. Albany, Ga., a city that is always active in fire prevention work, arranged to give talks on Saturday afternoon at strategic points, so that the need for fire prevention would be carried home to the farmer.

There is no person more keen for fire prevention than the farmer. He is usually located at a point remote from the fire protection that the resident of the larger cities enjoy. The farm buildings consist of frame construction that have been dried and seasoned by many years of sunshine. Hay, feed for the cattle and other produce stored, are highly combustible. Besides he may be remote from the help of neighbors, so that in the event of fire, it would be some time before he could expect assistance from others.

Therefore a fire prevention idea placed before such men is sure to be retained and carried out. Farmers dread a fire even more than do the residents of the municipalities.

What Some Others Have Done

The Chamber of Commerce of Utica, N. Y., furnished cards to luncheon clubs on which the members were asked to indicate the nearest fire alarm box to their dwelling or place of business. In checking up on the results, the officials found that there was only a small percentage who knew the location of such boxes.

The Chamber of Commerce of Rome, Ga., arranged to have a special analysis made of the home inspection blanks that were filled in and returned. The resume contained a vast amount of interesting information that was useful later in checking up on defects.

In Spokane, Wash., last year, the Boy Scouts were organized to make house to house inspection and to direct the owners' attention to whatever defects were found. They also had the residents sign cards that the defects would be remedied. If the requested co-operation was refused, the Boy Scouts turned over the cards to the fire department officials.

In Brisbee, Ariz., 10,000 stickers were distributed to the local merchants for distribution to the public. Cash prizes were offered to the boy and girl collecting and turning in to the fire department the largest number of these stickers. A parade was also arranged in which children were dressed to represent the various fire hazards. Cash prizes were offered for the best costumes in the parade.

Each City Is Individual Problem

While there is an axiom in fire department work that no two fires are alike, it is also true in arranging fire prevention programs, that each city is a separate problem. One city may find that better results could be obtained by the effective use of window displays by the merchants; another place may find that the best results were obtained from the number of properly filled self-inspection blanks that were turned into the fire department.

While human nature is the same the world over, the result of outside influence has so changed the conditions of the individual that he may be more receptive to certain ideas or to ideas presented in certain ways than he would be to others. It is up to the chief working in co-operation with some of the city officials, to arrange a program that would best suit the needs of the city and that would best deliver the fire prevention message.

From the suggestions outlined, some ideas may be obtained to form a nucleus. Each year finds an added number of cities who have arranged novel programs or who report good results from following out the suggestions.

What will you do fire prevention week?

New York Fire College Term Starts

The New York Fire College opened for the Fall session on Wednesday, September 21st, at the old quarters of Engine 40 on West 68th street. Twenty-five junior officers were assigned to take the courses. The session was opened by Assistant Chief Thomas J. Dougherty.

A new member of the faculty was added. Deputy Chief John J. McElligott of the Marine Division was assigned the subject of ventilation. McElligott organized the rescue company twelve years ago. He is an Engineer and has seen service in all branches of the department.

Chief John Kenlon

The schedule for the Fall session calls for the following subjects and assignments:

September 21st—Formal opening, of the College; Tenement house and flat fires, Assistant Chief Thomas F. Dougherty. September 24th—Instruction in tools and equipment in the Drill Yard in East 67th street, Members of the College Board. Sept. 29th—Practice with tools and equipment in the Drill Yard. Sept. 30—Operation of Motor Apparatus and Overhauling at fires, Deputy Chief Marshall and Deputy Chief McKenna.

October 5th—Discipline and Administration, Assistant Chief Dougherty; Ventilation, Deputy Chief McElligott. October 6th—Fire Alarm Telegraph, Battalion Chief Rankin, October 11th—High Pressure, Deputy Chief Helm; Care of motor apparatus, Deputy Chief Marshall in charge of the Repair Shops. October 12th—Fire Alarm Telegraph, Battalion Chief Rankin. October 17th—Loft fires, Chief Helm; Combustibles, Inspector Leo Lieberman of the Division of Combustibles, Bureau of Fire Prevention. October 18th—Oil and Varnish

Assistant Chief Dougherty Addressing the Officers Attending the New York Fire College

(*Continued on page* 1053)

Hay Fire Spreads to "Woodworker"

Early Collapse of Old Wooden Hay and Feed Warehouse Responsible for Large Sash Plant Blaze

THE large "woodworker" fire is in itself no mean task for even the large fire department, but when it is coupled up with fires in feed warehouse and coal yards, the result is a problem of serious aspect.

Such was the situation in the fire described in this article of the series on Administration.

The city in which the plants were located has a population of about 70,000, and is located in the north-central part of the country. The water supply in general was adequate, but only five hydrants were available, and of these one was connected to a four-inch main (hydrant No. 5, as shown in sketch).

The Fire Department

The fire department consists of twelve companies, with the following equipment:

Engine Co. No. 1, 1,000-gallon triple combination.

Engine Cos. Nos. 2, 3, 4, 5, 6, and 7, 700-gallon triple combinations.

Hose Cos. Nos. 1 and 2 combination chemical and hose cars, each carrying 1,500 feet of 2½-inch hose.

Ladder Co. No. 1, an 80-foot aerial ladder, tractor drawn.

Ladder Co. No. 2, a city service truck.

Response to Alarms

Response to alarms is as follows: First alarm, Engine Cos. Nos. 1 and 2, and Ladder Co. No. 1.

Second alarm: Engine Cos. Nos. 3 and 4, and Hose Co. No. 1.

Third alarm: Engine Cos. Nos. 5 and 6 and Ladder Co. No. 2.

All other apparatus is secured by special call.

Description of Property Involved

The property immediately involved in the fire included a two-story brick warehouse stocked with building materials, some combustible and others not so; a three-story frame feed and hay warehouse; a wood sash and door factory; a coal yard and coal pocket.

As shown in the diagram herewith, the sash factory extended through the entire block. It was of two-story height and brick, with wood joists. To the rear of this plant was a storage yard for lumber, as indicated in the sketch, and directly behind the lumber piles was the coal yard and coal pocket. The coal pocket was of timber and plank construction. Other structures in the neighborhood are shown in the diagram.

The Fire

Fire started somewhere around midnight on the ground floor of the hay and feed warehouse—presumably from spontaneous ignition in oily beef-fattening food. The fire was not discovered until it had extended to the second and third floors. At that time a night fireman at an ice plant northeast of the warehouse noticed the blaze and sent in a call to the fire department.

A first alarm assignment was sent out in command of the assistant chief. When the department arrived the warehouse was fully ablaze and a vigorous breeze from the west was driving a shower of sparks across Houghson Street toward the coal yard and cash factory. It was not long after the arrival of the first company that the heat radiated from the fire was so great that the men were forced to operate from a distance.

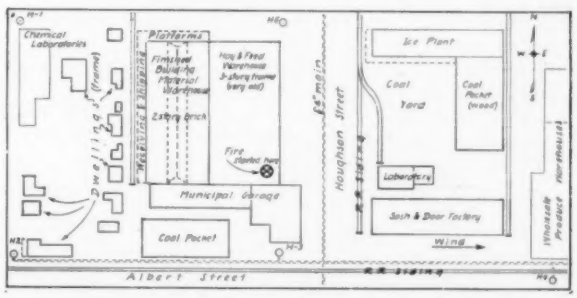
The blaze in the warehouse continued to increase in intensity, and about fifteen minutes after the department was on hand, the second and third floors dropped through to the street, followed shortly after by the walls.

How the Fire Was Fought

Upon his arrival, the assistant chief quickly noted the seriousness of the fire and transmitted a second alarm, bringing Engines Companies Nos. 3 and 4 and Hose Co. No. 1.

He placed Engine No. 1 at hydrant No. 5 and stretched in two lines along Houghson Street. Due to the advanced stage of the fire and the danger of the building collapsing, both of these streams were operated from the street. Difficulty was experienced in getting the pump to operate at capacity, for when both lines were in operation neither streams was effective. The engine supplied a single stream satisfactorily, so one line was shut off.

The second engine (No. 2) was placed at hydrant No. 3 and two lines stretched in along Houghson Street, each line being equipped with a 1½-inch nozzle. It was just at the time this second engine was getting



its lines in operation that fire was discovered among the lumber piles. Apparently sparks from the warehouse fire were carried by the wind to piles of shavings alongside the lumber, and the new fire resulted. One line of the two from Engine No. 2 was directed to cover this latter fire.

Second Alarm Apparatus Arrives

As the second alarm apparatus was arriving, the warehouse collapsed. It was discovered at this time that fire had entered the two-story building materials warehouse directly behind the hay and feed warehouse, and was making rapid headway. The assistant chief ordered the two arriving companies to get in operation in this building, one taking hydrant No. 1 and the other hydrant No. 2. Each stretched a single line equipped with 1½-inch nozzle.

The single line from Engine Co. No. 1 and one of the lines from Engine Co. No. 2 continued to operate on the hay and feed fire and at the same time covered the municipal garage, a one-story structure of brick located just south of the fire.

In the meantime the chief arrived and he sent in a third alarm, calling out Engine Cos. Nos. 5 and 6 and Ladder Co. No. 2.

Then the line operating on the lumber piles called for help, fire having reached the sash factory. The single line from Engine No. 1 was switched to give a hand at this point, but the fire had made too much headway. By the time the apparatus of the third alarm rolled in this plant was involved beyond a doubt.

Fire Gains Headway

Fire continued to spread in the sash plant and among the lumber piles, despite the best efforts the department could put forth. And it continued to extend in the building materials warehouse as well. Just prior to the arrival of the third alarm apparatus, the chief special called Engine Co. No. 7.

Engine Co. No. 5, of the third alarm, was placed at hydrant No. 4 and two lines stretched to the fire in the sash factory. Engines Nos. 6 and 7 were placed alongside engines Nos. 3 and 4 at hydrants Nos. 2 and 1, as other hydrants were not available. Each stretched a single line to the fire, that from Engine 6 operating on the first floor and that from Engine 7 on the second floor of the building materials warehouse. These two lines, together with the other two already in operation, held the fire in that building.

But fire continued to grow in the sash factory, and it was soon seen that this plant was doomed. The coal pocket, too, was already smoking.

The chief finally decided to concentrate all efforts toward preventing the blaze from reaching the coal—and this he was successful in, after a very severe fight.

A check-up shows that the fire partly destroyed the building materials warehouse, completely destroyed the hay and feed warehouse, as well as the sash factory and lumber piles. It was held, however, from spreading to the municipal garage, coal yard, coal pocket and buildings across the railroad tracks to the East.

The editor's ideas on handling of this fire will be given in the next issue of this journal.

A Progressive Industrial Chief

Charles J. Stewart, chief of the fire department of the Pittsburgh Plate Glass Company is an ardent booster of the value of FIRE ENGINEERING. He states that he would be at a loss without it.

Chief Charles J. Stewart.

Chief Stewart whose photo shown herewith was taken at the time he was attending the New York Fire College in 1919, has been chief of the department since September 1, 1911. He is a member of the National Fire Protection Association and the International Association of Fire Chiefs; he is a constant attendant at the conventions of the last named organization.

Easton, Md., Against New Quarters

Firemen of Easton, Md., are united in determination not to accept a building selected by the city as fire department headquarters.

As a result of the firemen's move, a temporary injunction has been granted restraining the commission that has been appointed from purchasing or erecting a new station.

The firemen state that should the old music hall be purchased for the headquarters, their lives would be endangered as they would have to cross heavy traffic in answering alarms. Another statement made was that if the purchase was made, there would be very little left of the $30,000 appropriation with which to buy new apparatus and fire department equipment.

New York Has First Negro Officer

New York City now has its first Negro officer in the Fire Department. He is Lieutenant Wesley Williams, born in New York City, 30 years of age, eight years in the department and now first of his race to be promoted. There are three Negroes in the department.

He was assigned to Engine Co. 55 in Broome street near the Bowery where he has served since he was appointed January 10, 1919. In promoting Williams with five other firemen who were elevated to the rank of lieutenant, Fire Commissioner Dorman made no reference to his race.

When asked later by newspapermen if he cared to take notice of the fact that the department now had its first Negro fire officer, Mr. Dorman said:

"To me Williams is just a regular member of the New York Fire Department, duly qualified by the accepted Civil Service

Commissioner Dorman of New York City Congratulating Lieut. Wesley Williams

standards to be promoted, and I have therefore promoted him. There is no room in the fire service of this city for taking note of race, creed or color. Williams has a very good record. His name is on the roll of merit, Class A in efficiency. He has never had a complaint. He was for years the first chauffeur of that company. I can see no reason for singling him out for comment. I don't think the citizens of this city care much when danger confronts them whether the fireman coming up the ladder to their window to save them is a white man or a black man. Why inject the subject?"

WM. JEROME DALY.

Berkeley, Cal., Chiefs Receive New Cars—The Berkeley, Cal., council has purchased Dodge cars for the use of Assistant Chiefs William Meinheit and John Eichelberger.

Siren to Call Members to Meetings—In order to increase the attendance of the volunteer firemen of Verga, Pa., at the meetings, a suggestion has been adopted that the siren be sounded.

S. San Francisco Sells Improvement Bonds—South San Francisco, Cal., has sold $40,000 bonds which will be used to purchase new equipment for the fire department and for the installation of 130 additional fire hydrants.

WITH THE EDITOR

The Salary of the Chief

There can be no gainsaying the fact that the average fire chief is a very much underpaid official. Quite often it will be found that the salary of the chief hardly equals the pay of the average skilled laborer. This to the one man upon whom devolves the responsibility for the lives of the citizens of the city or town and the safety of their property.

The injustice of such a state of affairs need hardly be pointed out. But beyond this, the policy of a city in underpaying this important officer in the conduct of its most vital department is short-sighted. The chief should represent the very highest type of man that the department can produce. The fact that, in so large a majority of cases, the fire departments of the country are officered by this very type of individual is a strong commentary on the loyalty and enthusiasm of the men who head the fire forces.

However, this fact by no means excuses the municipalities which expect their chiefs to give their best services for the smallest amount that in decency can be given them. In some cases it isn't even that.

"The laborer is worthy of his hire!"

Fire Prevention Week

Again the period has rolled around when the entire country is asked to direct its attention to the subject of decreasing the fire losses. That Fire Prevention Week fills a most pressing need in the economy of the nation's daily life cannot be denied. The carelessness of the public in matters of protection and the precautions against fire is, judging from statistics, still very much in evidence.

The question that naturally arises in the mind of the fire chief and others who are students of the science of fire prevention, is: Why the tremendous fire loss? In spite of propaganda, of meetings, parades, floats, lectures, and all of the means employed to bring the subject most vividly home to the public's mind, fire goes on uninterruptedly burning up property and wasting lives, through unnecessary and inexcusable carelessness. Inexcusable, because warnings have repeatedly been broadcast in a hundred different ways and in such form that not one individual can have failed to have received some intimation of the staggering economical loss which his carelessness—in conjunction with others—has caused.

It is true that some of the apparent increase in the amount of the country's fire loss can be marked off on the ground of increase in values. But not all. It is hoped that it has reached its peak and that we are due now to experience the results of the strenuous labors for fire prevention that the chiefs and others have spent in the past few years.

One factor in such a happy result, it would appear, should be the tendency of many fire chiefs and their departments to look upon every week as Fire Prevention Week! In other words never to relax their efforts from day to day in keeping ever before the public the idea of fire safety and fire carefulness. While the special period devoted to fire prevention during the year is of great help and usefulness in the special efforts it entails in bringing the subject to the fore, yet those cities whose fire departments have kept eternally at it and never let up in their endeavors to instill in the people the principles of fire prevention, have been the ones which have been able to point with pride to a low per capita loss.

Making every week Fire Prevention Week will probably do more toward reducing the fire loss of the country than any other means employed by fire preventionists.

Fire Officers as Orators

One of the indirect results of the activities incident to Fire Prevention Week has been the cultivation of the gift of public speaking among chiefs and other officers—and even among the privates—of fire departments. The facility to express oneself smoothly and clearly in speaking to an assembly often lies dormant in the individual and only requires cultivation and practice to develop. The necessity forced upon fire department officers to take part in the Fire Prevention Day and Week exercises has probably done much to bring out such latent talent, which is going to prove of inestimable benefit not only to the individual but also to his department and the city it represents.

It stands to reason that a man who has learned to think clearly upon his feet before an audience has acquired the habit of constructing and adjusting his ideas to fit the occasion and this alone will increase his value as a commanding officer in time of emergency. Quick thinking in speaking will lead to quick thinking in action, and that, even more than any other thing, is a necessity for a fire officer.

Then, again, a man who speaks easily and fluently and is able to express himself clearly and concisely, without undue hesitation will quickly command respect from his subordinates, provided, of course, that he thoroughly knows the subject upon which he is speaking.

Of course, it is true that many very able men—experts in their line—are unable to express their knowledge in

well arranged words. A poor speaker is by no means necessarily a poor officer. Quite the contrary, many chiefs and other officers who are considered at the height of their profession are quite unable to make even a good short speech. But, where this gift is present, it may be cultivated with value to the highest degree.

"PUP" FIREBOAT PROVES VALUE IN BOSTON FIRE DEPARTMENT WORK

Row Boat Fitted With Outboard Motor and Small Pump to Fight Fires Beneath Docks —Has Had Opportunity to Prove Its Value

By HARRY BELKNAP

BOSTON, MASS., has a new addition to its equipment for fighting dock fires. This is a round bottomed row-boat fitted with an Evinrude pump and outboard engine to be used at fires under wharves and bridges inaccessible to fireboats and land companies. The small boat is carried on the davits of

Boston's Tiny New Fireboat in Action

It is a row-boat equipped with an Evinrude pump and outboard motor and has already proved its worth for fighting dock fires.

Engine 31, the steam fireboat "Thomas A. Ring" which is stationed at the north end pier in Boston.

The following description of the equipment is taken from a recent General Order of the Boston Fire Department: The pumper is manufactured by the Evinrude Motor Company, of Milwaukee, Wisconsin. The motor for the pump is a high speed twin cylinder, three port, valveless type, developing 4 to 5 horsepower at 1,400 revolutions per minute. The engine speed ranges from 600 r.p.m. to 2,000 r.p.m.

The clyinders are 2⅜ inches in diameter with 2½-inch stroke. The ignition is high tension with magneto built into the fly-wheel. The overall dimensions are as follows: height, 17 inches; length, 32 inches; width, 11½ inches; weight, 104 pounds.

The carburetor is of the automobile type with float, needle valve, and throttle. The gasoline tank has a capacity of 1⅓ gallons. The motor will run for two and a half hours on a gallon of fuel. The engine is water cooled automatically from the pump which is directly connected with the motor. The suction opening is 1½ inch with standard threads. The discharge is fitted to use Boston Fire Department 1¼ inch hose and the length of the discharge hose is ten feet.

The pump has a specially designed rotary gear with gray iron casings, bronze rotor and pinions and a Monel metal shaft. The following table shows the capacity of the pump based on factory tests:

Pressure in pounds	Gallons per minutes	Pressure in pounds	Gallons per minute
160	15	110	27
150	16	100	30.3
140	18.5	90	33.7
130	21	80	37.5
120	24	70	42

For propelling the boat there has been installed an Evinrude Sport Twin outboard motor of 2½ horsepower which weighs 44 pounds. This is a double opposed, 2 cylinder, 2 cycle motor. The boat makes a speed of about six miles an hour.

Recently the department was called to an alarm from Box 443 for a brisk fire under the lower pier of House No. 41, Hoosac Docks, in the Charlestown district of Boston. In connection with this fire District Chief Philip A. Tague submitted the following report:

"Engine 31 responded and the Evinrude motor boat was put in service for its first practical operation, and as I believe that the department members are interested in its efficiency I submit the following facts:

"The fire was under the pier and had extended under the floor of House No. 41 for a distance of about 50 feet and was making a very heavy smoke that would have caused land companies considerable trouble in opening up the heavy floor timbers. The land engine companies had no opportunity to operate at this fire.

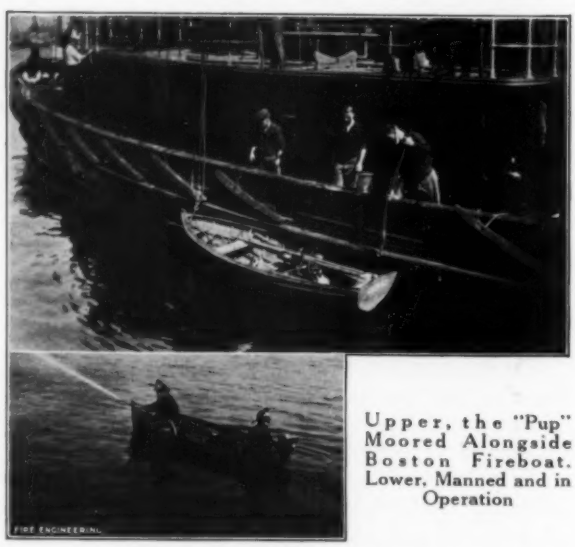
"The Evinrude motor was put in service and extinguished the fire in a very short time, and the loss, approximately one hundred dollars, would have surely run into thousands but for this boat."

While Captain Edward Montgomery, of Eingine 31, was trying out the new "pup fireboat" as the Boston newspapers refer to it, John E. Corcoran, a longshoreman on the Savannah Line Dock, fell into the water and was rescued from drowning by Capt. Montgomery and the firemen in the small boat.

A crowd had gathered on the dock to watch the test of the new fire-rowboat. Corcoran was standing on the edge of the wharf. In some manner he lost his balance and plunged headlong into the water. There were a number of logs floating about on the surface and in coming up Corcoran scraped his head and wrist on them. He managed to keep afloat by clinging to one of the logs until Capt. Montgomery drove the small boat to the spot. Corcoran was dragged out of the water with boathooks and ropes and pulled into the small boat in an exhausted condition.

The small boat can be used most advantageously to extinguish fires under docks as it can play a good stream of water from underneath the string-piece and thus hit many places where streams from the large fireboats cannot reach.

During the exhibition of high pressure streams by the Boston Fire Department on September 14, in honor of delegates to the convention of the New England Water Works Association, a test



Upper, the "Pup" Moored Alongside Boston Fireboat. Lower, Manned and in Operation

was held of the little fireboat in the Fort Point Channel and motion pictures were taken of it.

Fire Commissioner Eugene C. Hultman and Chief Daniel F. Sennott, of the Boston Fire Department, are much pleased with this latest acquisition to their marine fire equipment.

Fordyce, Ark., Station Nearly Completed—The new fire station and city hall of Fordyce, Ark., is nearly completed. New fire apparatus and equipment have been ordered for the station.

Reading, Pa., Tests Pumpers—The sixteen pumpers of Reading, Pa., were tested before a large crowd of spectators as a part of the annual inspection of the department. Chief John G. Niethammer was well pleased with the showing.

QUESTIONS AND ANSWERS

Conducted by FRED SHEPPERD, B. Sc., M. E.

"He that questioneth much shall learn much"—BACON

NOTE—Readers of FIRE ENGINEERING are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified.

Friction Loss and Nozzle Reaction

To the Editor:

Please give me some information in regard to a question on Page 804 in your July 27th issue. My figures show that if 900 gallons flow through the 900 feet of 2½ inch feed line, the friction loss from the engine to the siamese is 189 lbs., being 21 lbs. per 100 ft. This leaves only 11 lbs. to take care of the friction loss in the lead lines and also in the siamese.

Also, the same condition exists in the following problem on the same page but my figures show about 200 lbs. loss in friction to the siamese, leaving nothing to take care of the friction loss in the two lead lines and in the siamese.

Please show me also an example in regard to tipping over a 65 ft. water tower, where a 2 inch nozzle is used. The weight of the tower is 7½ tons, wheel gauge 8 ft.

Thanking you for the information I am, B. N.

Answer: The problem referred to by our correspondent is as follows: An engine is pumping through 900 feet of 2½ inch hose to a siamese (Y) connection from which two 100 foot lines of 2½ inch hose are stretched to 1⅛ inch nozzles. Engine pressure is 200 lbs. What is the pressure at each nozzle and what is the pressure at the Y connection?

By reducing the layout to the equivalent of a single line of 2½ inch hose, and by combining the two nozzles on the branch lines, it was found that a nozzle pressure of 14.57 lbs. approximately would result. The discharge with this nozzle pressure would be approximately 300 gallons per minute, giving a discharge from each nozzle of 150 gallons per minute.

In determining the pressure at the siamese the friction loss in one branch line was added to the nozzle pressure giving the pressure at the siamese. This proved to be 6 lbs. for friction loss plus the 14.57 lbs. at the nozzle or 20.57 pounds at the siamese.

In the first example you cite, where you say you have but 11 lbs. to take care of the friction loss in the Y connection and in the branch line, it may be mentioned that 11 lbs. will be satisfactory for this purpose. Assuming a flow of 150 gallons in each branch line, as given in the original solution, you will have a friction loss of approximately 5.9 lbs. for each branch line. This will mean that you will have 5.1 lbs. to overcome the friction in the Y connection which is sufficient.

In the second question you raise, it is not surprising that you find friction loss to be such that there is no pressure remaining at the Y connection. It must be remembered that where the formula is used for computing friction loss $(2Q^2+Q)$ that this formula is derived from experimental results and does not give figures when used which tally exactly throughout all scales of pressures and hose sizes. Incidentally, it is unfortunate that all formulas do not give like answers and that when friction loss, calculated by the usual formula, is added to nozzle pressure it does not always give the engine pressure as determined by other formulas.

Regarding tipping over of a 65 foot water tower, due to reaction from nozzle, the following figures might be given:

The reaction in pounds is equal to $1.5 \times D^2 \times P$ where D is the nozzle diameter in inches and P, the pressure at the nozzle in pounds per square inch.

Now let us take the problem you give. The total weight of your truck is 15,000 lbs. and for the sake of demonstration the weight may be considered as being applied at a point midway between the two wheels or, at the direct center of the wheel gauge. Thus from this point we would have a distance of 4 feet to each side of the truck.

The moment arm would then be 15,000 x 4 or 60,000 feet-pounds. Before the truck could be tipped over this moment arm would have to be slightly exceeded by the moment arm of the nozzle reaction times the distance of the nozzle from the ground. Assuming a 2 inch nozzle with nozzle pressure at 100 lbs., you would get a reaction, by formula, totalling 600 pounds. The height of the nozzle above ground is 65 feet. Thus we would get a moment arm of 65 x 600 lbs. or 39,000 feet pounds. As this amount is less than the moment arm found by multiplying the weight of the truck by the 4 feet distance from center of gravity to outside of wheel, the tower would not tip over with this pressure.

To find at what pressure it would tip over we proceed as follows: Find the moment arm as given before, which, for the weight of truck and 4 foot distance, is 60,000 feet-pounds. Divide the 60,000 feet-pounds by the length of the arm up to the nozzle (the height of the tower, 65 feet) 60,000 divided by 65 gives 923 pounds. This is the reaction which you must have at the nozzle to tip the water tower over.

Now using the formula for reaction again, instead of "reaction" we put in the figure 923 and we have $923 = 1.5 \times 2 \times 2 \times p$.

Solving this out we get $p = \frac{923}{6}$ or 154 lbs. In other words with a 2 inch nozzle and the tower extended 65 feet it would require a nozzle pressure of 154 pounds to tip the tower over, provided it was not supported by guy wires or other braces.

Again, the Water Tower Problem

To the Editor:

In a recent issue of FIRE ENGINEERING (August 10th) I noted a water tower problem by P. H. A. which you kindly solved for him and which I understand. But in trying to solve the problem by formula in the National Board of Fire Underwriters' Red Book, I was unable to get the results obtained by you, that is, if I am swinging the formula right and considering all conditions.

Please look over my figures and let me know where I am in error, or in other words, where I have differed from your solution. G. J. H.

Answer: The problem referred to by the correspondent is: It is desired to supply a water tower with two pumpers, each pumping through two parallel lines of 2½ inch hose 800 feet in length each, making a total of four 800-foot stretches of 2½ inch hose. The water tower is to be extended 65 feet, 2-inch nozzle is to be used and 90 lbs. is desired at the nozzle. Find the discharge from the nozzle under the above conditions; find the discharge from each engine. What engine pressure will be required? Could a second size engine be used under the above conditions?

In solving the problem the 4 lines were reduced to a single line of 2½ inch hose and then the layout was solved on the basis of a single line of 2½ inch hose feeding a 2 inch nozzle. Engine pressure so found was 171 lbs. To this was added a back pressure totaling 28.2 lbs., and friction in the water tower, 15 lbs. giving a corrected engine pressure of 314 lbs. approximately. A slight deviation in the method of solving the problem, also given in the original solution, gave 322 lbs. engine pressure.

And here are the figures given by G. J. H. 90 lbs. nozzle pressure, 2 inch nozzle, gives 1137.6 g. p. m., or 1138 gallons approximately. Dividing this figure by 2 to get the discharge at each pumper, delivering 569 gallons per minute.

Each line (as there are two per engine) would give one-half of 569 or 284.5 gallons per minute.

On the basis of this discharge the friction loss in each line of hose is determined, using the formula.

Friction loss (100 ft. 2½ inch hose) $= 2 \times Q \times Q + Q$. This gives a friction loss of 19.033 lbs. per hundred feet, and for 800 feet, a total friction loss of 152.26 lbs.

Our correspondent adds the nozzle pressure to this friction loss plus 15 lbs. allowed for friction in the water tower and 28.2 lbs. back pressure in the tower. This gives a total of 285.7 lbs. which is appreciably less than the value secured by the Underwriters' formula as shown in the original solution.

The reason for this difference is the difference in formulas used. The friction loss formula gives results which do not tally exactly with friction found by use of Underwriters' formula and then by subtracting nozzle from engine pressures.

As noted previously in the columns of this journal it is unfortunate that no formulas have yet been devised to give exact results.

The solution by G. J. H. is entirely correct and all of his calculations have been made without error. In practically all

fire department examinations his method would receive full credit, with the exception of, possibly New York City, which at a previous examination allowed slightly less credit for the method of solution pursued by G. J. H.

Extinguisher with Salt Water

To the Editor:

Will you kindly answer the following in your Questions and Answer Columns:

In an emergency, while working at a fire with a 40-gallon chemical tank, and no fresh water being available for recharging, could salt water be used? If so, would any change in the proportion in the soda and acid be necessary? We now use 16 pounds of soda and 8 pounds of acid with a fresh water charge. Would this combination with salt water create any dangerous gases or excessive pressure in tank?

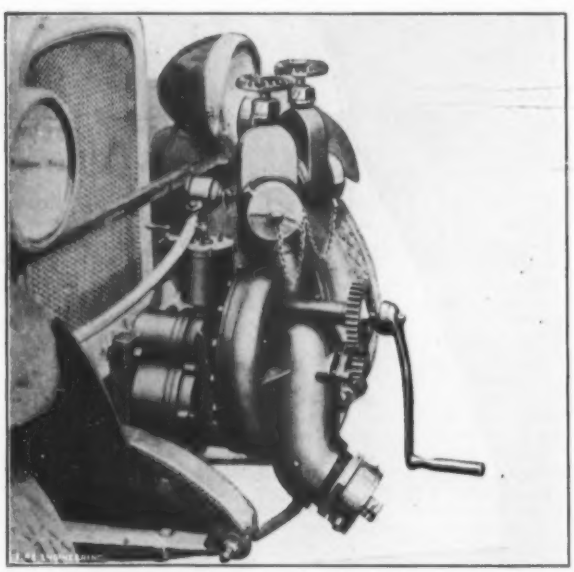
Respectfully yours,

F. F.

Answer: No dangerous gases or excessive pressure would be produced by using salt water, but you would get practically no pressure at all. By salt water it is inferred that you mean sea water, which contains such a high percentage of salt that you could hope for no satisfactory reaction by using it in place of fresh water in the extinguisher. The salt in the sea water seems to neutralize the acid, causing a very weak reaction. It is thoroughly unsuitable for use in preparing the solution for chemical extinguishers of a soda and acid type of any size.

The New Barton Pump

Announcement has just been made of the new Barton fire pump. This pump is attached to the front of an automobile as illustrated and drives direct from the motor. The pump, which is of the centrifugal type, operates at twice the speed of the motor. There is an automatic device which keeps the pump



Barton Fire Pump Mounted on the Front of an Automobile

This shows a side view of the pump and the cranking gear that enables the car to be cranked while the pump is attached. The pump fits in between the space of the two headlights.

constantly primed and ready for service. It is said that the pump can deliver two good size fire streams.

The suction opening is located on the center line of the pump and at the bottom so as to make it more convenient. The pump inlet may be easily tapped for a connection to a booster tank.

A hand lever operating a combination friction and dog clutch starts or stops the pump when the engine is running.

Oxford, Pa., Accepts Pumper—A Mack pumper costing $11,000 has been officially accepted by Oxford, Pa.

George C. Reiter Killed

George C. Reiter, of the George C. Reiter Company, manufacturers of fire apparatus gongs, Canton, Ohio, was killed on September 21, when the automobile in which he was riding overturned. He was on the way to the Tunney-Dempsey fight, with Chief of Police John Wise and two others, and the accident occurred northeast of Lima, Ohio, en route for Chicago. The police chief was also killed and the occupants of the car were injured.

Detroit Has Novel Meeting

Detroit fire fans were treated to exclusive motion pictures of European fire departments at a meeting recently of the Box 12 Associates, the fans organization in that city. The exhibitor was C. Hayward Murphy, president of the Fire Commission of that city. The exhibition was part of the program of the September meeting which was held at the home of R. R. Weaver. Commissioner Murphy is an inveterate motion picture addict and he can "shoot" the scenes with expert precision.

One of the novelties of the meeting was the form of summons or call to the meeting. Paraphrasing the language of the London Fire Brigade and the Book of Rules of the New York Fire Department, the invitation to attend the meeting was couched to fit the alarm box nearest to the home of the host for particular meeting. The September call ran like this:

BOX 12 ASSOCIATES
of
DETROIT, MICHIGAN
INSTRUCTIONS

Your assignment cards and running boards are hereby revised to include the following:

AMENDED AND SUPPLEMENTAL RULE 12.

There is hereby promulgated Special Call preliminary 12-9193, effective Friday, September 9, 1927, at 8:00 p. m., same to be construed and acted upon as requiring to-wit: All members responding to Box 12 on first alarm to proceed in this instance from their respective "fire halls" at the appointed hour to Box 9193 (Old number 723 for information of those who ran with the horses), at Van Dyke and Coe, the location of the "outbreak" being specifically 1454 Van Dyke, east side, between Agnes and Coe, then and there to "deal" with same in the usual method as a regular telegraphic application for assistance.

By order of:
R. R. Weaver,
Deputy.

Countersigned and approved:
Paxton Mendelssohn,
Chief.

Attest:
Harry L. Shearer,
Secretary.

Schedule of evolutions at Box 12-9193

1st. Alarm.
Companies arrive and are assigned to position. Inspection of miniature petrol pumpers, model hose lorries, and aerial escapes.
2nd. Alarm.
Business session.
3rd. Alarm.
Music Hall Cinema—"The Paris Fire Dept."
4th. Alarm.
Model brigade turnout
5th. Alarm.
Attendance at refreshment van.

W. J. DALY.

Minneapolis Fire Budget Cut

Requests made by Chief C. W. Ringer of Minneapolis, Minn., urged that the city provide a fund of $185,000 for 103 additional firemen to the department, but the request has been denied.

A. C. Godward, consulting engineer of the Board of Estimate and Taxation, investigated a report that the department was undermanned and he told the committee that instead of providing for the additional men, the city would do better to establish a fire prevention bureau which could be operated at a lower cost. He also urged that the water department be placed on the same efficiency plane as the fire department.

The committee accepted the recommendation of Mr. Godward and in addition cut $6,000 from another part of the fire department budget. Mr. Godward stated that a fund of $50,000 would be sufficient to operate the fire prevention bureau against the $185,000 wanted by Chief Ringer for the 103 additional firemen.

He said that he had analyzed the report of the Underwriters and that in their report, there were a number of repetitions so that the number of men to be added was increased.

In addition, he recommended that the committee abandon two fire stations and that the chemical companies at these houses could be combined with other stations farther south in the city.

The matter of the firemen selling benefit tickets was brought up for discussion. An investigation will be conducted to see if this practice could not be done away with.

FIREMEN HAVE UNUSUAL HANDICAPS IN FIGHTING BIG BRIDGE FIRE

Unfinished Pittsburgh Bridge Catches Fire Among Falsework and Workmen Fail to Send in Prompt Alarm—Bad Traffic Conditions Hamper Firemen

ON Saturday afternoon, August 27, as a result of carelessness of a workman with an acetylene blow torch, which ignited the wooden forms for receiving the concrete; a much delayed alarm to the fire department; steep hillside street and traffic jams, there occurred one of the most unusual daylight fires that has taken place in the city of Pittsburgh in years. This fire almost destroyed the nearly completed reinforced concrete highway bridge spanning the right of way of the Castle Shannon Incline Plane and connecting two uncompleted sections of the new Mount Washington Boulevard overlooking East Carson Street at Brownsville Avenue, being constructed at a cost of nearly $2,000,000. It caused an estimated loss of $80,000 to the contractor of the bridge, the Vang Construction Company, with no insurance to cover the loss and many months delay in the reconstruction of the bridge, which with the new Boulevard was to be opened for traffic on December 1 as well as putting the incline out of commission for several days and a fire loss to the incline of approximately $3,000

The burning structure, approximately five hundred feet up the steep hillside from Carson Street and isolated from all approaching streets, offered the firemen a problem and a hard job in reaching it with their lines of hose, which had to be dragged for squares by hand.

The same old story applies to this fire as it has to many others in the past, the workmen or employes trying to control and extinguish the fire before sending for the fire department, and the firemen finding the fire raging beyond control upon their arrival. In this particular case it was stated that the workmen on the bridge tried for twenty minutes to extinguish the fire before making any attempt to send in an alarm of fire.

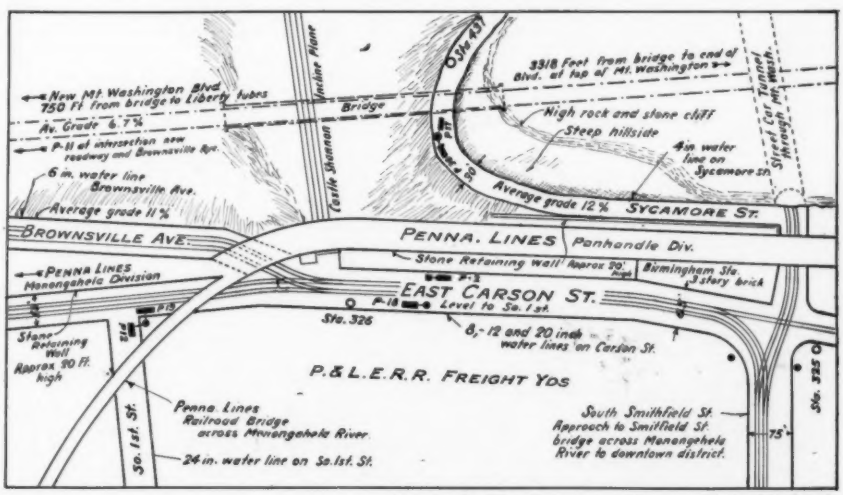
Upon the arrival of the first alarm companies the firemen found the flames raging almost half way across the wooden false work supporting the arches of the great bridge and the flames traveling at a rate of speed as though gasoline or some other inflammable liquid had been poured on the false work of the bridge to help the flames in their complete and quick destruction.

Within fifteen minutes after the arrival of the firemen the heavy timber and channel iron supports, large steel beams and frame work carrying the huge concrete arch on the lower side of the bridge nearest Carson Street, weakened by the intense heat gave way and with its burning forms and false work fell to the deep hollow and tracks of the Castle Shannon Incline Plane, one hundred feet below, piling up a tangled mass of burning wreckage, setting fire to the right of way of the incline plane, destroying cables, ties and twisting rails for a distance of approximately one hundred feet. About 5 p. m. the upper and remaining arch which the firemen tried hard to save, fell without an instant warning, thus completing the destruction of both huge arches and frame supporting forms.

A traffic jam at the foot of the incline plane on East Carson Street at the intersection of Brownsville Avenue, leading to the new Liberty Traffic tubes and the new Mount Washington Boulevard, one of the most congested and dangerous street intersections in the city, occurred almost the moment the first alarm of fire was sounded from Station 326, Brownsville Avenue and Carson Street, which is directly across the street from the foot of the incline plane. Street cars, automobiles, motor trucks, wagons and pedestrians were caught in a whirl of confusion that hindered the movement of fire apparatus arriving on the first alarm. Fire Companies arriving on the second alarm only added to the confusion and jam.

Two alarms and a telephone call for additional companies were sent in for the fire, calling seven engine companies and two truck companies to the fire.

The first alarm at 3:04 p. m. was answered by Engine Companies 11 and 30 and Truck Company 12 in command of Battalion Chief Saul Klein of the Fifth Battalion. The second alarm at 3:15 p. m. was answered by Engine Companies 2 and 18 and Chief of Department Richard L. Smith, who directed the fire fighting. The third alarm or telephone call at 3:35 p. m. was answered by Engine Companies 19, 12 and 17 and Truck Company 17.


New Mt. Washington Blvd. 750 Ft. from bridge to Liberty tubs
Av. Grade 6.7%
P-11 at intersection new roadway and Brownsville Ave.
6 in. water line Brownsville Ave.
Average grade 11%
Castle Shannon Incline Plane
Bridge
3318 Feet from bridge to end of Blvd. at top of Mt. Washington
High rock and stone cliff
Steep hillside
4in water line on Sycamore St.
Average grade 12% SYCAMORE ST.
BROWNSVILLE AVE
PENNA. LINES Panhandle Div.
Stone Retaining Wall Approx 90' High
Birmingham Sta. 3 story brick
PENNA LINES Monongahela Division
EAST CARSON ST.
Level to So. 1 st.
Sta. 326
8,-12 and 20 inch water lines on Carson St.
Stone Retaining Wall Approx 90 Ft. high
P.& L.E.R.R. FREIGHT YDS
Penna. Lines Railroad Bridge across Monongahela River
So. 1st. St.
24 in. water line on So. 1st. St.
South Smithfield St. Approach to Smithfield St. bridge across Monongahela River to downtown district.
75'
Sta. 325

Drawing by Wm. E. Patterson, Bureau of Fire, Pittsburgh

Diagram of the Mt. Washington Boulevard Bridge Fire at Pittsburgh

Sycamore Street is very crooked and steep, leading from Carson Street to the top of Mount Washington, an elevation of 377 feet, with an average grade of 12.3 per cent. This street passes under the western end of the burned bridge, and the only street leading from Carson Street which the firemen could use in reaching the western end of the burning structure. This made the work of the firemen hard in reaching the fire with their apparatus, the section of the street from Carson Street to the bridge being badly cut up from the many heavy trucks haul-

Left, the Burning Eastern Span of the Mt. Washington Boulevard Bridge, Pittsburgh, Showing Abutment after Collapse of North Span, and Burning Wreckage on Tracks of Inclined Plane. Center, View of Bridge Under Construction before Fire, Looking East from West End. Right, the Same View, at the Time of the Fire. The Nearly Completed Bridge Across Monongahela River Shown in Left Background

ing material to and from the new bridge and boulevard. Low water pressure on this street during the early stage of the fire also hindered the work of the firemen.

An 8, 12 and 20 incch water main on Carson Street, with a sufficient number of hydrants, having an average pressure of 80 pounds, gave the companies that had to lay in from Carson Street plenty of water to combat the fire.

Upon the arrival of Engine Companies 12 and 19, answering on the third alarm the nine hundred feet of hose of Engine Company 19 and the one thousand feet of hose of Engine Company 12 were siamesed into one line with one section of hose leading from the siamese connection to the branch pipe with an 1⅛ tip, both lines being attached to Engine 19 a 1000 gallon Ahrens-Fox triple combination, which furnished an effective stream, the pressure gauge at the pumper showing 265 pounds with a hydrant pressure of 80 pounds. The Ahrens-Fox pumper was attached to a fire hydrant at South First and Carson Streets and the two lines making up the siamese had to be dragged up a steep hillside west of the incline plane, up steep steps, over back yard fences and through gardens to a spot near the Sycamore Street end of the bridge, where seven or eight firemen had about all they could do to handle and direct this powerful stream with the line anchored to a board fence on the steep hillside from which they had to work.

Firemen from Engine Company 18 had a difficult and perilous climb up through the false work of the Sycamore Street abutment and short sections of the spans left standing at this end of the bridge, with a line of one inch lead hose in order to extinguish some fire which was burning briskly and spreading beneath the remaining sections of the spans towards Sycamore Street. This fire could not in any way be reached and extinguished other than by streams from the ground.

Engine Company 11, the first company due to arrive at the fire on the first alarm, proceeded up Brownsville Avenue to a fire hydrant at the entrance to the Liberty Tubes and the starting point of the new Mount Washington Boulevard where they had to drag their line of nine hundred feet of hose approximately a distance of eight hundred feet over the rough, unpaved roadway of the boulevard to the eastern abutment of the burning bridge. They did efficient service in driving the fire back from this abutment and saving the framework from complete destruction.

During the progress of the fire, Chief Smith and Battalion Chief Klein kept their men at a safe distance and out of all danger from being struck by the many burning boards and timbers falling from the top of the structure and when the spans fell there were no casualties. After the fall of the spans the firemen worked their way in close to the structure and in a short time extinguished the burning wreckage.

In extinguishing the fire, 5,650 feet of 2½-inch hose, 100 feet of one-inch lead line hose, all cotton rubber lined, one hydrant stream and seven pumper streams were used, with 1 inch, 1⅛ and 1⅜ inch tips being used on the eight streams.

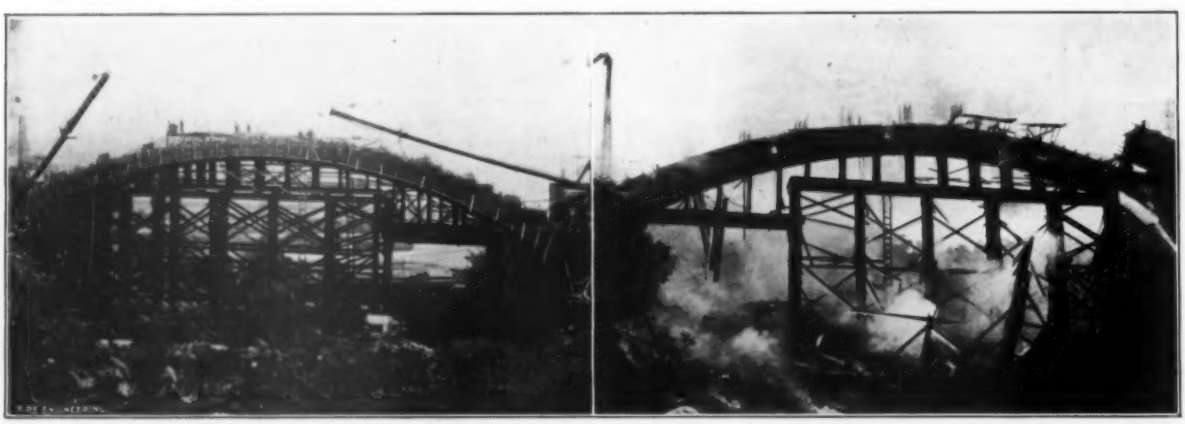
A total manual force of fifty-three uniformed firemen were on duty at the fire consisting of the Chief of Department, one battalion chief, six captains, five pumpmen, two enginemen, two assistant enginemen, five drivers, twenty-three hosemen, six laddermen and two chief's aides.

Eleven pieces of fire apparatus, motor driven and tractor drawn were in service at the fire.

The duration of the fire was four hours and seven minutes, being struck out at 7:03 p. m. by Battalion Chief Saul Klein.

The total length of the burned bridge is 420′ 1″, width over all 35′. Total length of rib spans between abutments 201′, 10½″. Approximate clearance between ground and rib spans at crown, 90′. In the construction of the bridge, 330 tons of structural steel and reinforcing rods were used, 6,310 cubic yards of concrete, 710 cubic yards of this amount being used in the construction of the destroyed spans of which amount 620 cubic yards had been poured at the time of the fire and 160,000 feet of lumber (board measure) in the construction of forms and false work. The contract price of constructing the bridge is $304,957.50. The Vang Construction Co. had no private fire protection of any kind on the job in case of fire except garden hose used in mixing concrete.

WILLIAM E. PATTERSON.



Left, the Main Arch of Washington Boulevard Bridge, Before Fire, Looking North, Showing Falsework and Opening for Incline Tracks. Right, the Same Span, Just Before Its Collapse, Looking South, with Most of Falsework Burned Away

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands.

Week Ending September 23

MOUNT AIRY, MD.—Plant of People's Lumber Co..... 55
SACRAMENTO, CALIF.—Zellerbach Paper Co. building..... 275
KANSAS CITY, KAN.—Southern Bridge damaged..... 25
MILWAUKEE, WISC.—Cream City Lamp & Shade Co. plant.. 25
COVINGTON, KY.—Plant of Keller Hay & Grain Co..... 40
HUDSON, N. Y.—Ice Houses of Clermont Ice Company..... 40
KLICKITAT, WASH.—Sawmill of J. Neils Lumber Co..... 100
ONIDA, S. D.—Elevators of G. B. Sexauuer..... 50
SAN FRANCISCO, CAL.—McCormick Iron Foundry damaged.. 35
LOWELL, MASS.—Lakeview Park, Lake Mascuppic..... 80
EAGLE PASS, TEX.—Plant of Crystal Ice Co. destroyed.... 25
RICHMOND, Va.—Bldg. of Corley Music Co..... 170
SALEM, OREG.—Property owned by H. Steinbock..... 40
PATERSON, N. J.—Warehouse of A. B. Zlotkin..... 45
NEW ORLEANS, LA.—Industrial Armature Works..... 40
JACKSON, MICH.—Robert Automatic Screw Co..... 40
WETHERSFIELD, CONN.—Farm bldgs. of E. A. Isaacson.... 30
UNION CITY, N. J.—Richter's storage warehouse..... 65
POLK, PENNA.—Dairy Barn at State Training School..... 35
WEST ALAMEDA, CAL.—Clark & Sons Pottery Works..... 120
DUNDEE, IND.—Grain elevator destroyed..... 30
MEMPHIS, TENN.—Plant of W. B. Mallory & Sons..... 110
BLODGETT, MO.—Sparks Hotel and other establishments..... 80
BROOKLYN, N. Y.—David Welsch factory, 26 Hewes St..... 165
EARLSBORO, OKLA.—Half block of business buildings..... 125
SPOKANE, WASH.—Warehouse of B. G. Ewing Paper Co.... 100
OLATHE, KANS.—Garage of L. E. Thompson..... 65
SOMERSET, KY.—Richardson bldg. and adj. property..... 25
LIBERTY, KY.—Whipp Hotel destroyed..... 40
JOHNSON, IND.—Grain elevator, A. P. Hunt Co..... 40
BRIGHTON, IOWA.—Mill property of Henry Spellman..... 25
CAMBRIDGE, MASS.—Property of E. L. Bennett damaged... 25
FORT SILL, OKLA.—3 hangers of Post Field Army Aviation Camp 200
DETROIT, MICH.—Bldg. of Central Storage Company..... 100

Week Ending September 30

BIRMINGHAM, ALA.—Bldg. of Hardie-Tynes Mfg. Co.	80
GALESBURG, ILL.—College City Ice Cream plant damaged	35
SENOIA, GA.—Store of C. B. Daniels Sons	40
KINGSPOINT, L. I., N. Y.—House on H. W. Hoyt estate	80
LORETTEVILLE, QUE.—Plant of Armand Bastien Company	25
WHITEHALL, ILL.—Farm bldgs. of Peter Roundhouse destroyed	25
GADSDEN, ALA.—Farmers Union Warehouse destroyed	125
McGUFFY, OHIO.—Seven warehouses destroyed	80
WIGGINS, MISS.—Bldgs. occupied by P. E. Bond Motor Co.	40
BELLEVILLE, MO.—Baker Stove Works destroyed	300
BAKERSFIELD, CAL.—Commercial Hotel and adj. property	65
EAST DALLAS, TEX.—Queen Pharmacy and Cafe damaged	25
HASTINGS, NEBR.—Property of Golden God Pump Co.	80
SANTA CRUZ, CAL.—Redwood timber in Santa Cruz Mts.	25
NEW YORK, N. Y.—Eureka Shoe factory and Hamilton Rubber Co.	80
CHICAGO, ILL.—Plant of Friedlander Box Co.	30
ST. PAUL, MINN.—Mill of St. Paul Milling Co.	350
OTTAWA, ONT.—Ottawa Electric Railway Barns damaged	165
ROCHESTER, N. Y.—Former clubhouse of Oak Hill Country Club	80
DALLAS, TEX.—Bldg. occupied by Roos-Freedman-Shayn Co.	250
PRESCOTT, ARK.—Boiler station Autrey Oil Company	25
ST. PAUL, MINN.—Residence of J. V. Spears destroyed	25
COLUMBUS, MISS.—Farmers and shippers warehouse destroyed	100
CHARLOTTE, N. C.—The Springs Bldg. S. Tyron St.	25
NEW ALBANY, IND.—Retort plant of Interstate Public Service Co.	250
HUNTERTOWN, IND.—Property of Huntertown Grain Elevator Co.	35
CHERRY VALLEY, N. Y.—Property of C. J. Armstrong	75
SNYDER, TEX.—Strayhorn bldg. and equipment	40
BARRY, TEX.—Property of R. L. Hamilton	30
LEOMINSTER, MASS.—Music Hall Theatre block	125
OSYKA, MISS.—Totten Veneer & Lumber Co. plant destroyed	125
WILMINGTON, N. C.—Bldg. occupied by Southland Mfg. Co.	75
VANCOUVER, B. C.—Northern Pacific Bldgs. damaged	125
NEW ORLEANS, LA.—Warehouse of Jackson Brewing Co.	25

ILLINOIS FIREMEN GATHER IN JACKSONVILLE FOR CONVENTION

Association to Meet Next Year in La Salle —Thomas J. Ruddy of Joliet Re-elected as President — Many Interesting Papers

FIREMEN from all parts of Illinois met in Jacksonville, Ill., on September 13 for the fortieth annual convention of the Illinois Firemen's Association. President Thomas J. Ruddy of Joliet presided during the gathering.

Following the invocation, J. J. Reaves, mayor of Jacksonville, welcomed the firemen to the city. Responses to the addresses of welcome were made by Messrs Barkman, Myers, Lohmann, Thode and Lind. The association voted to send a floral tribute to M. G. Cook of Canton who was home ill.

The convention opened up on Tuesday afternoon with a paper on "Fire Protection and the Volunteers," by Richard A. Mollman of Millstadt. He said, "With the steady increase of modern farm buildings, this problem of farm protection will become a big issue. The building of concrete roads will eventually remove some of the worries of using heavy apparatus, but still the question of financing and paying for the expenditures entailed in buying some equipment and the expenses incurred in making the calls must be solved in some manner."

Chief Andrew Gillespie, division fire marshal of Chicago spoke on "The Value of a Training School for Firemen." The speaker stressed the fact that each fire was an individual problem and that no two fires were alike. George O. Land, deputy state fire marshal of Tuscola spoke on "Investigating Fires of Incendiary Origin." He said that in his home town about every third fire was caused by over-insurance.

Memorial services were held in the evening in the Central Christian Church and were conducted by Dr. Pontius.

Reports of officers and committees were presented on Wednesday morning. "Achievements of Fire Prevention," were outlined by John G. Gamber, state fire marshal. He said, "We are awakening public sentiment. There will be enough of it pretty soon to insist on real fire prevention work everywhere, providing we keep up the campaign. It is up to us. Despite encouragements, we must carry on. You, in your respective communities, are largely responsible for keeping up interest at home. It is to your benefit to do so. Your department is likely to get the things it needs if the public is interested."

Henry R. Rathbone, chairman of the sub-committee in Congress at Washington on Police and Firemen spoke on "What Can Be Done for Fire Fighters."

In the afternoon, H. B. Seeley, secretary of the Committee on Local Insurance Tax of the Illinois Municipal League addressed the firemen on "The Two Per Cent Foreign Insurance Tax."

Mr. Seeley, emphasized, "I mean to go to the insurance companies and insist that they must put into the rating system some recognition of the work of the fire departments in reducing the number of fires per hundred and in reducing the percentages of loss."

In the evening, there was a banquet of the association at 7:15.

At the Thursday morning session O. C. Forsman, chairman of the membership committee spoke on "Remedies for Small Towns and the Rural Fire Losses." La Salle, Ill., was chosen as the 1928 convention city.

The following were elected officers: Thomas J. Ruddy, Joilet, president: Albert Hasse, Peru, first vice-president; Roy W. Alsip, Champaign, secretary; Fred E. Danner, Mt. Pulaski, treasurer; Elmer W. Weidler, Mt. Olive, historian.

The following were elected members of the executive board: Pearl Smith, Madison, Simon Kellerman, Jr., Edwardsville; Sam Hunt, Jacksonville; Joe Valentine, Rock Island; Fred P. Haderlein, Carlyle; A. H. Winter, Highland; Louis Reich, Riverdale and H. C. Hosutt, La Salle.

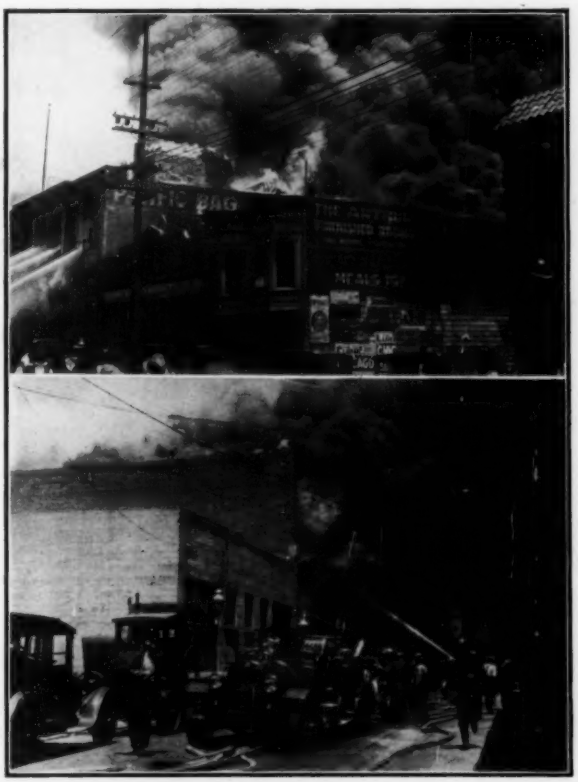
Ft. Dodge Firemen Injured by Chimney

Assistant Chief R. H. Grant of Fort Dodge, Ia., and a fireman were injured while fighting a roof fire. The chimney collapsed and showered the two men with bricks. The fireman was saved by the leather helmet that he wore, but the shock of the falling bricks knocked him unconscious and wrenched his neck and shoulders. The assistant chief was standing beside the fireman when the accident occurred—he was injured about the feet.

Firemen Dies Aiding in Rescue—A fireman of the Boston, Mass., department lost his life while assisting in the rescue of a woman from drowning at Nantasket Beach.

Haverhill., Mass., to Have New Station—Construction has started on a new fire station in Haverhill, Mass., to replace an old frame building on the same site that had been in use for some time.

Boston Apparatus Operator Commended—An apparatus operator of the Boston, Mass., fire department was commended for applying the prone method of recusitation upon a man removed from the water at a beach. The operator worked on the man for thirty-five minutes.



Bag Plant in San Francisco Makes Bad Fire

Several hundred men and women employed in a big factory in San Francisco, Cal., had to make a rush for their lives while others were overcome by smoke in a fire which destroyed the building. It made a spectacular fire and caused the injury of some of the men. The damage is estimated at $250,000. The photographs show general views at the fire.

BERLIN FIREMEN STAGE EXHIBIT FOR N. Y. HONORARY DEPUTY CHIEF

Chief Gempp Shows Unusual Courtesy to Honorary Chief Mainzer—Whole Day Devoted to Exhibition Drills

By WM. JEROME DALY.

ON a recent visit to the capitals of Europe where he made a special mission of inspecting the fire department, Honorary Deputy Chief Robert H. Mainzer, of the New York Fire Department, was given the unprecedented courtesy of a fire line pass issued for the first time to a foreigner by the Chief of the Berlin Fire Department, Herr Walter Gempp, who visited this country three summers ago.

Through the courtesy of Chief Mainzer, FIRE ENGINEERING is able to show some photographs of the Berlin Fire Department's special exhibition in honor the visiting Chief who was Herr Gempp's guest during his stay in Berlin. Chief Mainzer was quartered with the Berlin fire officer in his suite at Fire Headquarters, from which he responded to fires.

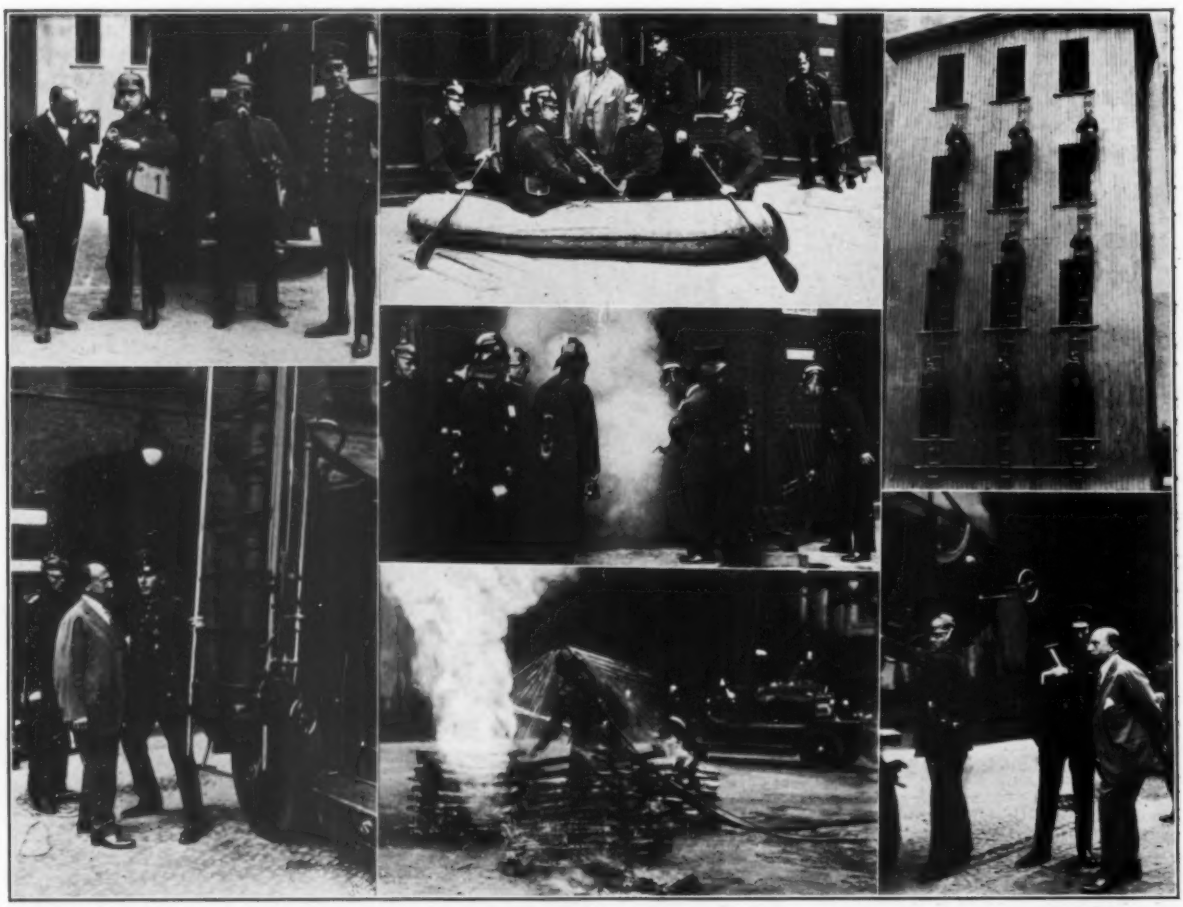
While in Berlin Chief Mainzer, who speaks German as fluently as English, addressed about 100 of the Berlin Fire Department's chief officers. During the meeting which was held at Fire Headquarters, there was a showing of "The Fire Brigade" picture which in Germany is known as "The Alarm." During the exhibition, Chief Mainzer explained several features of the film. The German fire officers thought the asbestos squad shown in the film quite incredulous.

The story of the corrupt building contractor as depicted in the film did not set well on the taste of the German fire officers. The day following the reception at Fire Headquarters Chief Gempp staged an exhibition for the visiting New Yorker. It lasted nearly all day and included every phase of the Berlin department, from fireboats to aerial ladders.

Chief Mainzer rode to a few fires with the Berlin fire commander and he tells me by letter that the traffic conditions for fire apparatus in Berlin are exceptionally better than in New York and other American cities. He informed me that there were not nearly as many taxicabs to contend with and that the Berliner fire officer travelled at a rate of speed which would have ended disastrously if attempted in the average American city.

Chief Mainzer is now on his way home. Upon his return, it is expected that he will go into still greater detail relative to the fire departments abroad. It was on his recommendation and report, following a survey of the principal cities of Europe thirteen years ago, that the New York Fire Commissioner ordered the first Rescue Company placed in service in the American metropolis. Chief Mainzer went into the subject thoroughly and wrote a comprehensive and interesting document for which the then Fire Commissioner Joseph Johnson gave him public thanks and acknowledgment in the annual report of the Fire Department that year.

Chief Gempp, when in the United States three years ago, visited Chicago, Milwaukee and other cities, but confined most of his time to New York City, where Chief Kenlon extended to him every possible courtesy and service. As he spoke hardly any English, Chief Gempp found in Chief Mainzer a helpful and entertaining host. The relations between the Berlin and New York Fire Departments are most cordial and reciprocal.



Exhibition Drills Staged by the Berlin, Germany, Fire Department for Honorary Deputy Chief Robert H. Mainzer, New York City.

1, L. to R., Chief Mainzer, two members of Rescue Company and Chief Walter Gempp, of Berlin Fire Department, with ambulance in background. 2. Demonstration of Collapsible Raft, inflated, by Rescue Company. Used to rescue drowning persons from lakes and rivers surrounding city. Will hold ten persons. 3. Berlin Fire Department Scaling Ladder Crew. Note the men working in unison, with all right feet on ladder and left taking next step. 4. Chief Gempp manipulating Magirus Ladder with one hand for Chief Mainzer. 5. Demonstrating smoke helmets in smoky cellar fire. 6. Chief Gempp explaining working of Magirus Ladder Truck in detail. 7. Fireman, protected by fire proof suit, with water curtain attached, walks into gasoline soaked woodpile and extinguishes fire, without any danger of injury to himself.

OF INTEREST TO VOLUNTEER FIRE DEPARTMENTS

Glenbrook, Conn., has New Fire Alarm System

A new fire alarm system has been installed at Glenbrook, Conn. The complete equipment as described by James F. Sullivan, Chairman of the Alarm Committee, is located in a fireproof tower building which was practically designed and built by Chief James F. Sullivan. The building is 14 feet by 14 feet and constructed of concrete block with concrete flooring and has an asbestos shingle roof. The steel tower rising above the building is 50 feet high with a small compartment just below the whistle covering the valve. This is heated by two electric lamps, which prevent the valve from freezing in winter. The piping is all of heavy duty brass, with

New Fire Alarm Building and Tower of Glenbrook, Conn., Fire Department.

brass fittings throughout. In one end of the building are the air tanks, which are 3 feet by 10 feet and the water cooled air compressor, which is directly connected with a 5 h.p. motor, controlled by an automatic device, which keeps a pressure of 11,095 lbs. on the tanks. When the pressure drops for any reason the compressor will immediately start and restore the tanks. Safety valves and low voltage devices take care of any trouble in the electric power wires.

In the opposite side of the building is the switchboard and whistle blowing machine. The storage batteries and automatic charging devices are located next to the door. The whistle, at the top of the tower, is 6 by 14 inches and can be easily heard in surrounding villages. A manual transmitter, with signal wheel, is located at the temporary fire station where there is always someone on hand. Two street boxes are in service and more will be added in the near future. The signals are sent in on quick time 1½ second intervals between blasts. An 8-inch mechanical gong is located within 10 feet of the driver's seat.

The building is located in the rear of the lot on Glenbrook Road and in the near future the department will build a fire station in front of it without disturbing the alarm.

Syracuse, N. Y., to Erect New Fire Station—A new fire station will be erected in Syracuse, N. Y., to protect the east end section of the city.

Chicago to Teach How to Turn in Fire Alarm—A plan of teaching people in Chicago how to turn in a fire alarm has been started by Fire Commissioner Goodrich. Demonstration boxes have been placed at several places and those who are interested can obtain free instruction from the firemen.

A Short Course for Fire-Fighters

The third annual Iowa Short Course for Fire Fighters will be held on October 18 to 21 at the Iowa State College, at Ames. This will be a four day school in fire fighting and fire prevention. The idea was first tried out in 1925 at the suggestion and with the hearty cooperation of the organized firemen of the state.

The short course for fire fighters is really a fire school at which Iowa firemen, fire fighters, mayors, councilmen, building officials and other city and village officials may obtain information and practical knowledge on new developments in fire fighting and fire prevention. During this four days' school Iowa State College will try to be of service to the firemen and city officials of the state, to give them the most advanced information which experts have worked out, to bring before them as speakers and councelors men who are nationally known in their fields.

Fire Fighting—The short course will consist of a varied program of demonstrations, lectures, discussions, and a fireman training school. The handling of fires in extra hazardous districts, fighting special fires, the use of chemicals, the selection and care of fire fighting equipment, salvage work, and ventilation in fire fighting are some of the subjects which will be discussed under the general theme of Fire Fighting.

Fire Prevention—The different phases of fire prevention and fire prevention education will be thoroughly explained and discussed under the leadership of experts in this work.

Fireman Training—A training school is being planned in which every fireman may have the opportunity of not only observing demonstrations in ladder and hose evolutions, first aid for injuries, and resuscitation, but of actually trying his skill with his fellows in the training which firemen should master.

Individual Problems—The discussion and consideration of individual problems will have a larger place than ever in the program this fall. Firemen and city officials are asked to bring their local fire problems for the counsel and suggestions of the experts on the staff of the short course.

No fees will be charged for the instruction and work of the short course.

Firemen Arrested on Arson Charge

Two firemen and a taxi cab driver of Port Washington, L. I., N. Y., were arrested on a charge of setting fire to a building in order to play the part of the hero.

All of the men were cab drivers and chaffed at the dull life of their environment. The firemen wanted to display their ability to play the part of heros, their dexterity in handling scaling ladders and the heavy hose lines. They wanted to shine in the light of hero worship. But such was the ill fortune of the men, Port Washington does not have many fires.

And so a fire was started in the office of a real estate development between Port Washington and Sands Point. As could be expected, the two firemen in the story, were the first to respond and they worked incessantly to extinguish the blaze. Residents commended them for their work and the glory was heaped upon them unstintingly. The shock came when two days after the fire, they were arrested for arson. Two years ago, six volunteer firemen from Rockville Center were found guilty of a similar crime.

Attleboro, Mass., Considers Station Erection—The finance committee of Attleboro, Mass., is considering the erection of a new fire station.

Stryker, O., Homecoming Will Purchase Apparatus—With the funds obtained from a homecoming celebration, Stryker, Ohio, will purchase motorized fire apparatus.

Three Boys Indicted on Arson Charges—Three boys have been indicted by the Middlesex County, Mass., grand jury on arson charges. It was contended that they were responsible for a number of incendiary fires that occurred in Cambridge, Mass., on August 29.

Detroit Selects Site for Fire Headquarters—The long disputed question of a site for the erection of a fire headquarters in Detroit, Mich., has been finally settled. It was finally decided that the present Wayne and Larned streets headquarters site would be enlarged for the new building.

Asst. Supt. Donahue Retires

After a long term of faithful and valuable service rendered in the fire alarm branch of the Boston, Mass., fire department, Richard Donahue, Assistant Superintendent of Fire Alarms, has retired on pension.

Richard Donahue, Asst. Fire Alarm Supt., Boston, Mass.

He was appointed to the department on June 25, 1889, as a repair man. He was promoted from repairer to batteryman on June 3, 1890, and to assistant operator on December 1, 1890.

In July of 1891 he was made operator and became chief operator on August 10, 1906. On December 23, 1910, he was promoted to the position of Assistant Superintendent.

He had charge with Superintendent George L. Fickett of the construction and installation of the equipment in the new fire alarm office in The Fenway rendering assistance and co-operating with the engineers of the Gamewell Company in the plans which were so successfully carried out to make Boston's new fire alarm headquarters the finest in the country.

Mr. Donahue makes his home on Centre Avenue, Dorchester, and has a host of friends both in and out of the fire department. He is in such excellent health that few persons realized that he had reached the age of 70 years when retirement becomes compulsory under the Boston city regulations.

Shortly before his retirement took effect a group of friends gathered in the fire alarm office and presented him with a gold watch as a token of their esteem. The presentation of the gift was made by Superintendent Fickett.

HARRY BELKNAP.

Massachusetts Firemen Meet

The Massachusetts State Firemen's Association held their 48th annual convention in Salem, Mass., on September 13, 14, and 15.

Deputy Chief James S. Koen, of Salem, was elected president after Chief Howard C. Kimball, of Salem, had declined the nomination and had named his deputy chief to take his place.

The other officers chosen were as follows: Joseph J. King, of Lawrence, first vice-president; F. T. J. McNamara, of Swampscott, second vice-president; Daniel J. Looney, of Boston, secretary; M. Joseph Manning, of Milton, treasurer; and W. A. Adams, of Worcester, sergeant-at-arms.

Capt. Michael M. Turner, of Newton, was elected commissioner for the $18,000 Firemen's Relief Fund and Capt. John H. Day, of Lynn, William F. McGrath, of Cambridge, and James H. Shea, of Springfield, were elected as members of the board of directors.

The convention opened on Tuesday, the 13th in Now and Then Hall at Salem with Chief Jeremiah F. Sullivan, of Fall River, presiding. Prayer was offered by the Rev. Ralph A. Sherwood, of the First Baptist Church, of Salem; and the minister in a brief talk declared that firemen were the defenders of the city and that no vocation was more hazardous.

Addresses of welcome were delivered by Mayor George J. Bates, of Salem; J. Asbury Pitman, of the Chamber of Commerce; Chief Howard C. Kimball, and Deputy Chief Koen, of the Salem Fire Department. The response in behalf of the association was made by Chief William C. Mahoney, of Peabody. Secretary Looney stated that the total membership in good standing is 9,354.

Edward J. Coveney, of Boston, made the report for the Commissioners of the $18,000 Firemen's Relief Fund and stated that $2,962 had been paid in injury benefits during the past year and $8,326 in children's benefits.

Michael J. McGonagle, of Boston, reported for the legislative committee. He said that during the 1927 legislative session at the State House in Boston forty-two bills affecting the firemen of Massachusetts were introduced and disposed of and of these ten were passed and enacted into law.

Among the measures that passed were the following: a petition providing for publication by the Commissioner of Public Safety of laws relating to fires and fire departments; a bill placing city electricians and superintendents of police and fire signal systems in Gloucester under civil service; a bill placing the chief of the fire department in Chicopee under civil service; an act authorizing indemnity to policemen and firemen for loss of pay due to absence from duty because of injuries sustained in line of duty; an act permitting municipalities receiving aid in extinguishing fires to compensate other municipalities for rendering such aid or for damages received while rendering aid; and an act providing for the appointment of a fire commission in the city of Chicopee.

At the second day's session of the convention the speakers were Charles P. Howard, Commissioner of Administration and Finance, representing Governor Fuller; Election Commissioner Frank Seiberlich, representing Mayor Nichols, of Boston; Mayor W. Harry Monks, of Fall River; Mayor Edward W. Quinn, of Cambridge; Ex-Mayor James M. Curley, of Boston; Theodore A. Glynn, former Fire Commissioner of Boston; and Edward E. Williamson, superintendent of maintenance of the Boston Fire Department. Ensign Floyd L. Keller and Major Fred Osborn, of the Salvation Army, spoke briefly, and after Secretary Looney read the roll of 24 firemen who died during the year, a memorial address was given by the Rev. Timothy J. Linehan, of St. James' Church, Salem.

Others who spoke briefly at the convention were Chief William C. Mahoney, of Peabody; and the Rev. Chester F. Hoyt, of Beverly. Matters discussed at the closing session included a petition for a bill to protect the drivers of motor apparatus involved in accidents, a bill to protect the widows and orphans of firemen killed in performance of duty, a bill to provide for payment of a pension to the widows of firemen killed on duty; and for uniform civil service examinations throughout the state.

A baseball game was played between the fire department teams of Brockton and Salem and resulted in a victory for Brockton by the score of 7 to 3.

The Ladies' Auxiliary of the Association held a meeting at which Mrs. Charlotte Crocker, of Nahant, was elected president for the ensuing year.

The retiring president of the firemen's association, Chief Sullivan, of Fall River, was presented with a handsome lamp.

Railway Fire Protection Association to Meet

The annual meeting of the Railway Fire Protection Association is to be held in the Hotel Statler, Detroit, Mich., on October 11 to 13. Some of the more important matters called for in the program are as follows:

Tuesday, October 11

Addresses and routine business.

Reports of committees, among them the following: Committee on Statistics—J. R. Chew, Chairman; Storage of Records—J. L. Rice, Chairman; Hand Book, T. E. Chapman, Jr., Chairman; Motor Transportation, G. H. Scott, Chairman; Protection of Materials in Storehouses, Material Yards, etc., P. A. Bissell, Chairman.

Wednesday, October 12

Open Discussion of Field Practice on Fire Protection and Prevention, directed by W. H. Klinsick.

The entire second day will be devoted to a discussion of work and problems encountered in the field. There will be a Round Table Luncheon at 1 p.m.

Thursday, October 13

Report of Committee on Hazards Incident to Installation, Maintenance and Operation of Air Compressors, H. W. Tinker; Grain Elevators, J. A. Rhoads, Chairman; Publicity Committee, W. F. Hickey, Chairman.

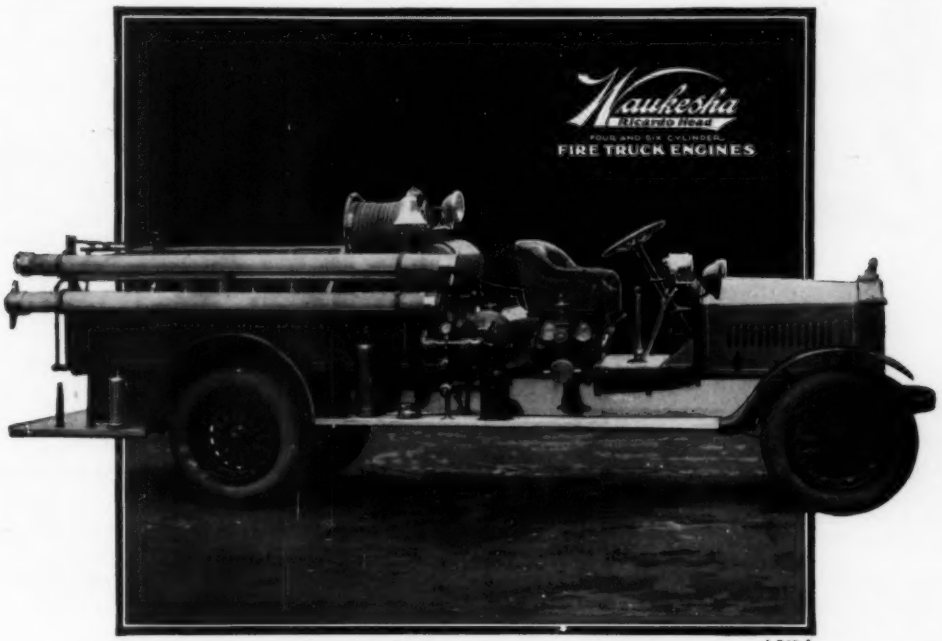
N. Y. Allows Outside Service Record

In obedience to recent local legislation in New York City whereby firemen or policemen are given credit for prior time served in one or the other departments, about two hundred members of the fire department were notified last week of the advancement of time in their behalf as recorded on their service records, for the period they may have served in the New York police before entering the fire department.

Among the beneficiaries of this legislation were three captains, twelve lieutenants, three engineers, one pilot and the balance were firemen of all grades. Some of them were credited with as much as seven years for service in the police. The minimum credit was about thirty days.

This means that a fireman who served five years in the police

Will Motor Co., Five Hundred Gallon Pumper equipped with smaller Waukesha Six



d-760-L

Smaller Pumper Makes Good

A Waterous rotary pump and Waukesha "Ricardo Head" intermediate size six-cylinder engine were used on this Will Motors Company fire pumper delivered to the Anoka, Minnesota fire department. At the conclusion of Underwriter's test at Minneapolis, Mr. Fred A. Waterous, Vice-President of the Waterous Company, said, "The operation of the machine during the test was excellent, there being no vibration of any sort. The engine ran cold throughout the test." This smaller Waukesha "Ricardo Head," seven bearing, six-cylinder engine was designed for 500 gallon capacity pumpers. The engine has the same sturdy characteristics of the well known Waukesha big six that is used so successfully on 750 gallon pumpers.

During the Underwriter's test this pumper maintained an average discharge of 508 G. P. M. at a net pressure of 125 pounds. This was through 50 feet of 2½-inch hose and a 1½-inch nozzle. Through the same hose and a 1-inch nozzle it delivered 264 G. P. M. at 203 pounds and through a ⅞-inch nozzle, 171 G. P. M. at 254 pounds net. To know more about this 500 gallon Waukesha "Ricardo Head" six, write for Bulletin No. 628.

D-774-L

FIRE EQUIPMENT DIVISION

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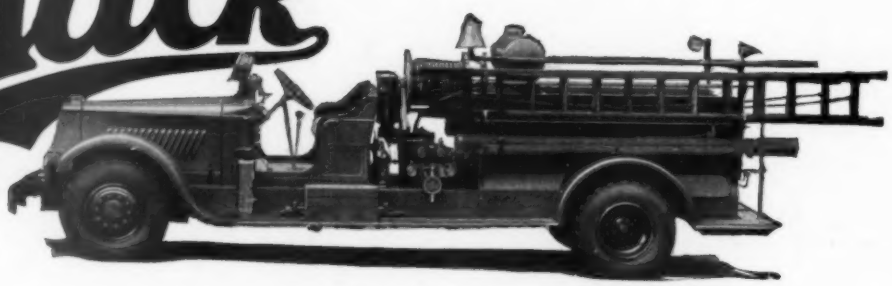

Progressive Fire Engineering

IN producing the fast, low slung, lightweight unit (illustrated) MACK continues to hold its position in the lead of the automotive fire equipment field.

This model A. L. six cylinder Triple Combination job has a capacity of 750 gallons per minute, equipped with either rotary or centrifugal type pumps.

The four wheel brakes, standard MACK dual-reduction drive, and complete rubber shock insulation makes this the last word in smooth, efficient operation.

Send for special literature and catalogs of any or all MACK Fire Fighting Apparatus.

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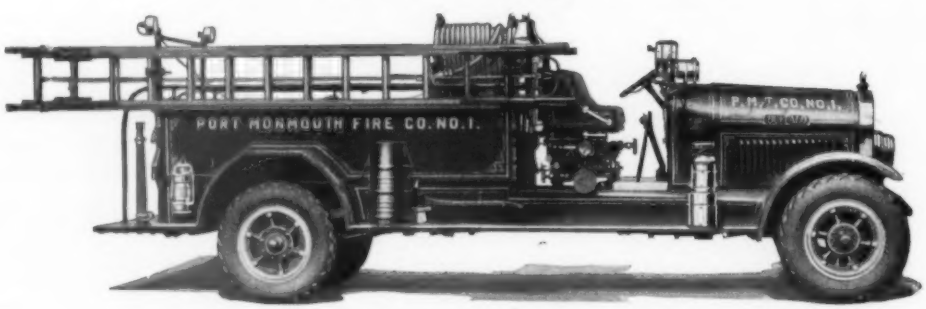
Buffalo Type 50



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and then accepted appointment in the fire department will be required to serve only fifteen years in the fire service instead of twenty years. There were several instances where firemen were allowed two credits of time, for they went back to the police once and then changed their minds.

The minimum retirement period in the New York police is twenty-five years, whereas it is only twenty years in the fire service. Obviously the fire department is preferable to a multitude of young men who entered examinations for both services and took the police job if it came to them first, only to change over later when appointment loomed up in the fire department.

W. J. DALY.

CORRESPONDENCE

Should Not Play With Fire Apparatus

To the Editor:

In your issue of September 7, 1927, there is an article by William Jerome Daly on "Should Not Play With Fire Apparatus," which is entirely in line with the plans that I have been carrying out here since I have been made chief.

If the Underwriters would make a ruling on this subject, it would do away with the playing with fire apparatus. They should also make a ruling to stop the use of the siren for other than fire calls where there is an organized volunteer fire department.

I enjoy every word in your magazine and only wish that you could issue the magazine every week.

Yours truly,
Chief T. B. BOYER,
Fulford, Fla.

Teaching Use of Fire Alarm Boxes

To the Editor:

We note with interest the article by Mr. Seaberg in reference to the use of fire alarm boxes by children. It might be of interest to your readers to know that Chief Mertz of the Akron Fire Department has been using a demonstrating outfit consisting of a fire alarm box, a small gong and relay connected to a set of dry cell batteries, all mounted on a board arranged to be carried to the different school houses and used to illustrate the complete action of a fire alarm call when a box is pulled.

Every year he details a captain or other officer who visits all of the schools and instructs the children on the use of a fire alarm box, explaining to them the many advantages of reporting fires in this way and also mentioning the penalty imposed by the law for false alarms being sent in. He also instructs the children to find the location of the box nearest to their home and has them tell their parents where the box is and just how to use it.

Since following this method of instruction the Akron Fire Department has very few, if any, false alarms and have never found, since this course of instructions has been instituted, that a false alarm has been sent in by a school child.

If any Fire Department officials would like to know more about this demonstrating apparatus, we will be very glad to answer any questions concerning it.

Yours very truly,
THE GARL SIGNAL COMPANY,
By H. B. BIXLER, General Manager.

Davenport, Ia., to Vote on Firemen's Increase—Davenport, Ia., will vote next spring on the question of a $15 pay increase for the firemen. First class firemen now receive $135 a month, lieutenants, $140 and captains, $142.50.

Fire Department Organized in Riga, Mich.—A volunteer fire department has been organized in Riga, Mich. The new organization is being equipped with a four-tank chemical engine and an electrically operated siren.

Conneaut, Ohio, Chief Has New Car—Chief R. R. Warren of Conneaut, Ohio, has now the use of a new roadster. The old car formerly used by the chief has been reconstructed to form an auxiliary unit.

Norristown, Pa., Installs Fire Alarm—A Gamewell siren system costing $500 has been installed in Norristown, Pa. The section has been divided into four zones and a code system has been arranged for blowing the alarms.

N. Y. Firemen Make Plea for 8-Hour Day

Hearing on a bill that would place the New York city firemen on an eight-hour basis was denied, and the firemen's association has filed a brief with the Board of Aldermen enumerating the various arguments for the passage of the bill. It was argued that not only would the moral and the health of the firemen be increased, but the city would have a more efficient fire department.

They appealed to the aldermen and the public to support the bill, that they might "enjoy some of the home comforts of their fellow citizens." More and better qualified candidates would seek employment in both departments, it was asserted, under an eight-hour day. The effect of eating irregularly and away from home on the present long shifts was said to be detrimental to the men's health and efficiency.

Under the proposed bill there would be no additional cost for the police department and in the fire department, although it would be necessary to appoint 1,500 more men, at a cost of about $2,700,000. This amount would be more than met by patrolmen and firemen sleeping at home, the first saving being the cost of 23,000 beds about to be purchased for officers and men of the departments. Hundreds of thousands of dollars would be saved, it was contended, in the construction of new police and fire buildings, and 500,000 square feet of floor space in police stations and fire houses could be immediately turned over to the city for storage purposes or for rent.

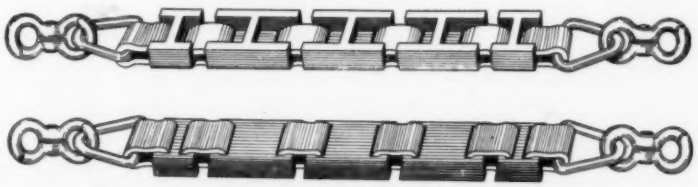
As far as the firemen are concerned, it was pointed out, there would always be a full force on duty, clothed and ready to respond to an alarm at all times, as compared with the present system, where firemen sleep in the fire houses and must lose time dressing when called for duty.

Steel Anti-Skid Chains for Apparatus

Following a number of years experimentation with fire apparatus in St. Louis, Mo., an anti-skid chain has been developed for fire department use that is said to stop frontwards and sideways skidding. Unlike most other appliances, the chain has been constructed especially for the use of fire apparatus.

At the present time, each winter or when the streets become slippery, a large percentage of the apparatus in the larger departments is constantly in the repair shop following accidents resulting from the skidding of the trucks.

The P-B Manufacturing Company of St. Louis has made a chain, the cross links of which are drop forged high carbon steel and the connecting links are electrically welded. The cross links can be removed and replaced without tools.



Views of Both Sides of the P-B Anti-Skid Tire Chain

The side chains are of carbon steel with each link electrically welded so that each chain has a resulting break test of 7,040 pounds to each chain. As two side chains are used on each complete chain, the break test is doubled to 14,080 pounds.

Each complete chain is equipped with locks which not only hold the chain tight on the tire, but can be shut and opened in quick time.

The chain was exhibited at the I. A. F. C. convention in Portland, Ore.

G. E. Morley Forms Own Company

George E. Morley, formerly associated with the sales of fire apparatus and later with the Gamewell Company, announces the organization of the Morley Signal Engineering, Inc., originators and distributors of the new Dualarm protective signaling systems of which he is president and general manager. The headquarters of the company are at 4612 Woodward Avenue, Detroit, Mich.

Under the title of Dualarm Protection, he has originated and is distributing a new combination night-watch, fire-alarm, sprinkler, bank and industrial protective system.

FIRE DEPARTMENT ACTIVITIES

Newcastle, Pa., to Erect New Stations—Bids have been invited for the erection of a new fire station in Newcastle, Pa.

Lebanon Pa., to Open New Station—On October 15, Lebanon, Pa., will officially dedicate its new fire station.

Colona, Pa., Approves Apparatus—Following a number of tests, Colona, Pa., has officially accepted its new fire apparatus.

Rockwood, Tenn., Installs Siren—A siren has been installed in Rockwood, Tenn.

Stockton, Cal., to Erect Drill Tower—A contract will soon be awarded for the erection of a drill tower in Stockton, Cal.

Lowville, N. Y., Chief Resigns—Thomas Lyng, for the past few years chief of the Lowville, N. Y., department has resigned.

Saugatuck, Mich., Purchases Apparatus—A pump equipped with a chemical tank has been purchased for Saugatuck, Mich.

Westwood, N. Y., Has New Fire Apparatus—A new Seagrave hook and ladder truck and a new pumping engine has been ordered for Westwood, N. Y.

Oley, Pa., Houses New Pumper—The new pumper of Oley, Pa., was formally housed on Labor Day. A large number of visiting firemen were present.

Fire Tower to be Erected in Topeka, Kans.—A steel tower is being erected at the new fire station in Topeka, Kans., for the firemen to practice their drills.

Apoplexy Victim Revived Twice in One Week—Members of Oakland, Cal., department have revived a victim of apoplexy twice in one week. The inhalator was used to revive the victim.

Oil City, Pa., to Purchase Pumper—Allowance has been made in the fire department budget for the purchase of a pumper for Oil City, Pa.

Siren Installed in Conshohocken, Pa.—Because a factory whistle in Conshohocken, Pa., resembles the sound of the fire siren, a new siren of a more distinctive note will be installed.

Wind Gap, Pa., Has New Fire Station—The public have been invited to inspect the new fire station recently completed in Wind Gap, Pa.

New Orleans Purchases Six Pumpers—Six Ahrens-Fox pumpers have been purchased by New Orleans, La., and an American-LaFrance tractor was also purchased.

Fall River, Mass., to Dedicate New Station—The new home of Company No. 2 in Fall River, Mass., will be officially placed in service early in October.

King, First Assistant Chief of Lauderdale, Fla.—Chief John L. Cody has promoted Captain C. W. King to the office of first assistant chief. Other promotions have been made down the line.

Oglesby, Ill., Purchases Apparatus—Funds have been raised in Oglesby, Ill., for the purchase of fire apparatus. A Graham Brothers' chassis has been purchased and a fire apparatus body will be mounted on it.

Tulsa Apparatus Crashes into Water Truck—Fire apparatus in Tulsa, Okla., crashed into a Ford truck owned by the water department. Both trucks were damaged and the accident was declared to be a draw.

Lincolnton, N. C., to Have Fire Alarm System—Private lines will be laid to the homes of the firemen in Lincolnton, N. C., to notify them when their services are required in case of fire.

Ladder Truck Delivered to Westwood, N. J.—A Seagrave ladder truck has been delivered to Westwood, N. J. The pumper which was ordered at the same time that the order was placed for the ladder truck has failed to arrive.

Falling Chimney Kills Wilmington, Mass., Firemen—Two Firemen of Wilmington, Mass., were killed by a falling chimney while working at a fire that destroyed a home in the Silver Lake section.

Large Attendance at Outing of Massachusetts Chiefs—There was a large attendance at the annual ladies' day outing of the Fire Chiefs' Club of Massachusetts which was held in the Adams House in Marblehead on September 7.

Chief Hughson of Auburn, N. Y., Dead—Chief Frank B. Hughson of Auburn, N. Y., died on September 22 following an operation. He was a member of the Auburn fire department for forty-two years.

Philadelphia Chief Sees Son Take Oath—Battalion Chief Michael Walsh of the Philadelphia, Pa., department had the honor of seeing his son Lieut. Benjamin M. Walsh sworn in as captain. Battalion Chief Walsh has a record of forty years as a fire-fighter.

Maine Hotel Destroyed by Fire—Dyke Mountain Farm, a summer hotel at Sebago, Me., was destroyed by fire by a blaze which was believed to have been started in a nearby barn from spontaneous combustion of the hay. Fifty guests who were at dinner when the fire occurred escaped uninjured.

Des Moines, Ia., Plans for Fire Prevention Week—A meeting has been arranged in Des Moines, Ia., to consider the observance of Fire Prevention Week. Emphasis will be placed upon the instruction of the proper manner in which to turn in a fire alarm.

Rome, Ga., Loses Popular Member—Bill Saul, twenty-one years old, and a member of the Rome, Ga., department died in the McCall Hospital following an operation. He joined the department on December 8, 1926 and while still young in the service, he had made a friend of every member and officer who knew him.

Hillsboro, Wis., Purchases Apparatus—Hillsboro, Wis., has purchased fire apparatus jointly with a number of the residents of the rural section. Under the plan of operation, the village cares for the apparatus, pays part of the cost and supplies the firemen. It is ready on short notice to answer alarms in the rural sections.

Iowa Ready for Third Short Annual Fire Course—The third annual short course for fire-fighters will be held at the Iowa State College October 18–21. The four-day course is offered by the engineering department in cooperation with the firemen of the state and the state fire marshal. Salvage work and ventilation will be emphasized this year at the school.

Against Elizabeth, N. J., Pay Increases—City officials of Elizabeth, N. J., are against the proposed pay increase for firemen. A petition was presented that the matter go to a referendum vote by the people; council-members warned the public that such moves will cost the taxpayers considerable more in taxes. They said the referendum idea was being overdone in Elizabeth.

Fire Apparatus in Cedar Rapids, Ia., Crash—A ladderman of Company No. 5 was seriously injured when two fire apparatus in Cedar Rapids, Ia., mistook signals and crashed into each other. In addition three other cars were smashed. Both fire trucks were traveling at a high speed when the crash happened—the trucks skidded and crashed into three automobiles that were parked near the curb.

Hose Used to Break Up Nebraska Crowd—Fire hose was used to break up a crowd of superstitious Mexicans in Tecumseh, Neb., who tried to get a glimpse of what was supposed to be a famous Virgin. Some boy started a rumor that the Virgin had come back to earth and the crowd that collected to see the holy person was too great for the police to handle. Firemen with a hose line soon dispersed the gathering.

Charges Established in Williams, Ia.—The charges for the use of the chemical truck in Williams, Ia., to points outside of the fire limits are as follows: a charge of ten dollars is made for the use of the apparatus; eight dollars for the men accompanying it and fifty cents is charged for each mile traveled by the apparatus. The cost of the refills for the chemical tanks are also charged.

San Francisco Drafting New Building Code—The San Francisco Builders Exchange has requested the mayor to appoint a committee of architects and engineers for drafting a new building code for the city. The builders say that the old code is inefficient and inadequate for the city. It is urged that the suggested committee draft the code for final approval by the Board of Supervisors.

Arrange Ball to Honor Coming Convention—A ball was arranged by the fire commissioners of Redding, Cal., to mark the honor of being selected as the 1928 convention city of the California State Firemen's Association and to start plans for the coming event. A report and suggestions will be outlined by Assistant Chief H. K. Smith. It is said that the association departed from their usual procedure when they selected a convention meeting place in a district that had a volunteer fire department.

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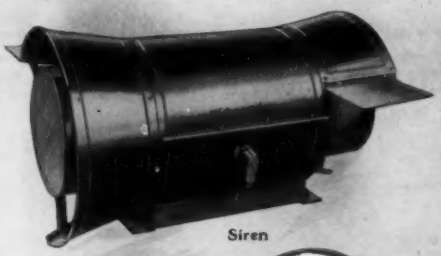

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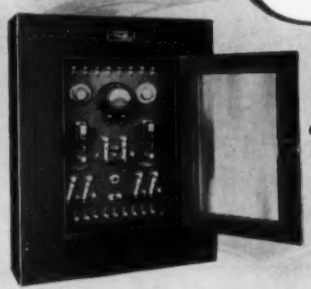

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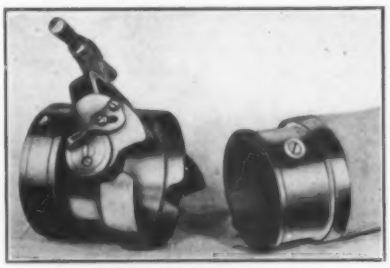

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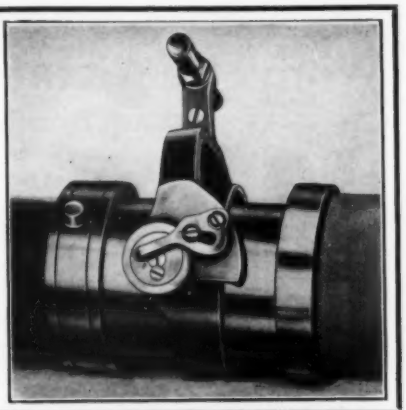

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PROPOSED IMPROVEMENTS

Watsonville, Santa Cruze Co., Cal.—At recent election city voted in favor of a $40,000 bond issue for the purchase of a pumper, life saving equipment, ten alarm boxes for the fire department.

Rosendale, Ulster Co., N. Y.—The erection of a fire station is being planned by the Active Hose Company.

Tenino, Thurston Co., Wash.—City Council considering the purchase of fire equipment, to include fire hose.

Huntington, Cabell Co., W. Va.—Fire Prevention Bureau considering the formation of a Salvage Corps.

Bessemer, Jefferson Co., Ala.—It is proposed to erect two more fire stations in this city after the extension of the city limits. Leo Hill, Chief of Fire Dept.

South San Francisco, San Mateo Co., Calif.—Bonds to the amount of $40,000 were sold recently. New apparatus and equipment to be purchased and a new station erected.

Des Moines, Iowa.—A site is to be selected by John W. Jennoy, Public Safety Commissioner, for the proposed Beaverdale fire station.

Culver City, Los Angeles Co., Calif.—Plans have been completed for the erection of a new central fire station here. Frank Wilcox, Chief of Fire Dept.

Fremont, Sandusky Co., Ohio.—City may vote on a $15,000 bond issue at the coming election in November, for the purchase of a new piece of apparatus for the fire department.

Ft. Lauderdale, Broward Co., Fla.—Plans are being made for the installation of a new fire alarm system, according to reports.

Clearwater, Pinellas Co., Fla.—City to invite bids shortly, according to reports, for the installation of a complete new fire alarm system. L. B. Martin, Chief.

Salesman Wanted for Fire Apparatus

An experienced fire apparatus salesman for Metropolitan territory and New Jersey. State experience in full. Replies confidential. Our salesmen have been notified of this ad. Address Box 144, care of Fire Engineering, 225 W. 34th St., New York, N. Y.

9-21

Seven Men Held on Arson Charges

The Federal Grand Jury has indicted seven men for conspiracy in a fire which destroyed the Bishop's Warehouse on June 24 in New York city and caused a five alarm fire. The object of the fire, it is stated, was to cover up the illegal withdrawal of material stored in the bonded warehouse.

Nine men were rounded up by the Federal authorities but only seven were named in the indictment as others have become state witnesses.

The building which was almost destroyed in June contained a large quantity of bonded Federal property which included alcohol, drugs and a large quantity of miscellaneous merchandise. At the times of the fire there were several cases of looting but no one was arrested. Smoke from the fire penetrated the financial section of New York city and it was necessary to turn in five alarms.

Avoca, N. Y., Has New Pumper—Avoca, N. Y., has received the new pumper which it had ordered three months ago for $5,000. The pump has a capacity of 500 gallons a minute.

Cumberland, Pa., Firemen Discuss Relief Fund—The Cumberland Pa., County Firemen's Association discussed the formation of a firemen's relief organization in the various sections represented by the association. Sixteen of the twenty-four companies of the association were represented and the matter will be further considered at the meeting to be held in Mechanicsburg on October 13.

Fire Truck with Sliding Hose Body

The apparatus shown herewith, a city service ladder truck built by the Maxim Motor Company for the Fire Department of Ridgefield, N. J., is equipped with a sliding hose body, with a capacity of over 1,000 feet of hose. It also has a copper booster tank under the seats. It is equipped with a 750-gal. pump and 200 feet of ladders. The apparatus was exhibited at the late convention of the New Jersey Fire Chiefs' and Firemen's Associations at Atlantic City.

CONVENTION DATES

Oct. 4-6—PENNSYLVANIA STATE FIREMEN'S ASSOCIATION. Annual Convention, Shamokin, Pa. Secretary, Charles F. Clark, 411 Bellevue Avenue, Wayne, Pa.

Oct. 11-13—RAILWAY FIRE PROTECTION ASSOCIATION. 14th Annual Meeting, Detroit, Mich. Secretary, R. R. Hackett, Baltimore and Ohio R. R., Baltimore, Md.

Oct. 17-19—KANSAS STATE FIREMEN'S ASSOCIATION. Fortieth annual convention, Kansas City, Kans. K. D. Doyle, secretary, Wamego, Kans.

Oct. 17-19—KANSAS STATE ASSOCIATION OF FIRE CHIEFS. Eleventh annual meeting, Kansas City, Kans. Secretary, K. D. Doyle, Wamego, Kans.

Oct. 18-21—SHORT COURSE FOR FIRE-FIGHTERS. 3rd Annual Course, Iowa State College, Ames, Ia. Address, Engineering Extension Department, Iowa State College, Station A.

May 7-10, 1928—NATIONAL FIRE PROTECTION ASSOCIATION (International). 32nd Annual Meeting, Atlantic City, N. J. Secretary, Franklin H. Wentworth, 40 Central Street, Boston, Mass.

New York Fire College Term Starts

(*Continued from page* 1034)

fires, Deputy Chief Worth; Streams and Nozzles, Deputy Chief Heffernan. October 22nd—Marine fires, Deputy Chief Worth; Prosecution of charges against members of Department, Deputy Chief Waldron. October 26th—High Pressure, Fire Boats, etc., at Gansevoort street pumping station, Deputy Chief Worth. October 27th—Stretching Hose, Deputy Chief Helm; Auxiliary Fire Appliances, Deputy Chief Waldron.

November 1st—Frame tenement and frame dwelling fires, Assistant Chief Davin and Deputy Chief Waldron. November 2nd—Repair Shops, Deputy Chief Marshall. November 7th—Water Tower practice at foot of East 102nd street, Assistant Chief Dougherty. November 14th— General discussions, the full Board.

The opening address, delivered by Assistant Chief of Department Thomas F. Dougherty, in the absence of Fire Chief John Kenlon was replete with instruction on tenement house fires. In his opening remarks Chief Dougherty told the young lieutenants to make notes, as they would be required later to write six reports on six different subjects. The lieutenants attend the college on their own time.

Chief Dougherty impressed upon the class the thought that there may be times and occasions when they will have to exercise the functions of a chief of department, until succeeded in authority by an officer of higher rank. He advised them that there is not a fire in New York City that will "get away" from the Fire Department if the first officer to arrive exercises proper judgment and does his duty as he sees it. He cautioned them not to hesitate to send in a second alarm. He cited an instance of a young lieuenant who had a fire all to himself and waited thirty-two minutes to send in a second alarm for a fire which later resulted in a fourth alarm. "Don't lose your head and don't blow up" Dougherty said, "but at the same time do not hesitate to take such action as you believe to be necessary."

Chief Dougherty dwelt at much length on the types and characteristics of different classes of tenement houses and the action of fires therein. He pointed out the hazards and told them what to look for, and how to handle it. He cautioned against excessive damaging of property; needless ripping out of walls and ceilings and general destruction where it was not necessarry.

The old type of tenement with its wooden stairs, etc., should have fusible bulkheads over the stairways and dumbwaiter shafts, Chief Dougherty declared. These fusible links he declared should be set to melt at 165 degrees, and in that way the fire would go out into the sky and not mushroom on the top floor and suffocate the occupants of that and the floor below.

The benefits of quick ventilation were gone into with much thoroughness. He said that no officer should wait for the arrival of a truck company to ventilate. "Use one of your own men; its time that counts in ventilation and ventilate as quickly as you can. I have used my own driver for that. I have sent him to the roof on my arrival many times to ventilate. Why not you?"

WM. JEROME DALY.

Brackenridge, Pa., Receives Pumper—A Seagrave pumper which was purchased by Brackenridge, Pa., for $13,000, has been delivered to the city.

Nash Made Lieutenant at Revere, Mass.—Charles E. Nash received the highest rating from among twenty-three candidates and he was appointed lieutenant in Revere, Mass.

Williamson of Boston Prominent Speaker—Edward E. Williamson, superintendent of maintenance in Boston, Mass., has developed into a finished convention speaker. Twice in the same week he has delivered talks before two major conventions. He spoke on the high pressure system before the New England Water Works Association and on the care and handling of motor apparatus before the Massachusetts State Firemen's Association.

FALSE ALARMS

—*Drawing by "Art" Espey*

Maybe the Fireman Was Exceedingly Thirsty!

Captain of the rescue squad to the rookie who was operating the fresh air pump: Now remember "Rook," that that hose reaches in to one of your buddies in that smoke filled cellar. Don't let up on that pump! See that he gets a good supply of fresh air continually.
Rookie: Pardon me, captain, but did you say air supply for the cellar?
Captain: Yes, air supply.
Rookie: Holy Crow! And I just this minute finished pumping in ten gallons of chemical. Good night! I'm sunk!

THEY TOLD THE TRUTH

Two of the modern generation were discussing the firemen's show that was being held at the Opera House on Thursday, Friday and Saturday. Gerry, the younger of the two flappers had seen the show.

"Gee, Gerry, the show must be good. See what it sez on the sign, 'Chorus of Sixty-Five.'"

"Yeh—well they looked it."

ORIGIN OF EXTINGUISHERS

A clue as to the possible origin of the modern chemical fire extinguisher is contained in an account of an old German legend of the "Spectacular Ruin," as told by Mark Twain, the noted American writer.

In the middle ages there was a ferocious dragon that exhaled sulphur fumes and that had an unsatisfiable appetite for human beings. The king offered one of his many daughters in marriage and the customary land holdings to the knight who would slay the dragon. Knight after knight tried and knight after knight was devoured by the beast.

"At last Sir Wissenschaft, a poor and obscure knight, out of a far country, arrived to do battle with the monster. A pitiable object he was, with his armor hanging in rags about him, and his strange knapsack strapped upon his back. Everybody turned up their noses at him, and some openly jeered him. But he was calm. He simply inquired if the emperor's offer was still in force. The emperor said it was—but charitably advised him to go and hunt hares and not endanger so precious a life as his.

"But this tramp only asked—'Were any of these heroes men of science?' This raised a laugh, of course, for science was despised in those days. . . . He said he would march against the dragon in the morning. Out of compassion, a decent spear was offered him but he declined and said, 'spears were useless to men of science.'

"When he started forth in the morning, thousands were gathered to see. The emperor said:

"'Do not be rash, take a spear and leave off your knapsack.'

"But the tramp said, 'It is not a knapsack,' and moved on.

The dragon was waiting and ready. He was breathing forth vast volumes of sulphurous smoke and lurid blasts of flame. The ragged knight stole warily to a good position, then he unslung his cylindrical knapsack—which was simply the common fire extinguisher known to modern times—and the first chance he got he turned on his hose and shot the dragon square in the center of his cavernous mouth. Out went the fires in an instant and the dragon curled up and died.

"The man had brought brains to his aid. He had reared dragons from the egg, in his laboratory, he had watched over them like a mother, and patiently studied them while they grew. Thus he had found out that fire was the life principle of the dragon. He could not put out fire with a spear therefore he invented the extinguisher."

The worm may turn but not until the fire apparatus has roared its way by and the cop has opened up the traffic again.

A TRUE STORY

Sometimes the officers of a fire department are given small automobiles in which to ride to fires—sometimes. Some officers are very reckless on their way to a fire—just some officers. But not Joe.

While talking to an officer from another company he said, "I've never had a wreck since I had this car."

"I believe you, Joe—you had an awful wreck when you got it."

"Is that your flaming Jane in the red dress?"

"Yes, why?"

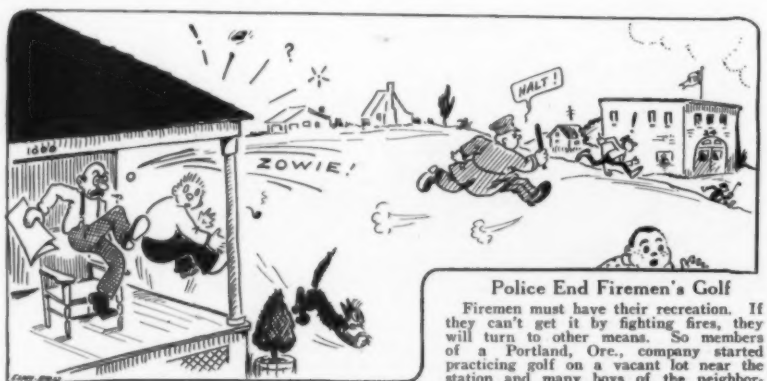
"Well, she's out on the porch having fire drill with some other guy."

SIGN OF LUCK

Firemen can not be superstitious. They walk under ladders, play with black cats and often break mirrors. So when one of the firemen was discovered with a rabbit's foot in his pocket, his friends started to tease him about it.

"Do you believe that that rabbit's foot brings you luck?"

"I think it does," said the questioned one. "My wife found one in my pant's pocket and she thought that it was a mouse."



Police End Firemen's Golf

Firemen must have their recreation. If they can't get it by fighting fires, they will turn to other means. So members of a Portland, Ore., company started practicing golf on a vacant lot near the station and many boys of the neighborhood joined with them. The firemen were far too good and some of the drives went out of the bounds of the lot and into the premises of a nearby house. The resident didn't care to have his home transformed into a permanent golf hazard. He nursed his grievance in silence. One night some firemen drove the ball over the heads of the family who were then on the porch—and then the family had the police drive the firemen from the miniature golf course.—*Drawing by "Art" Espy.*

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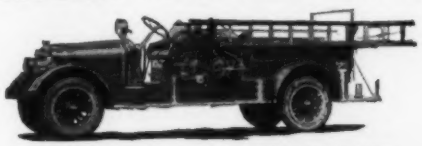

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The Remains of a Once Palatial Residence

Without warning, this chimney fire came. A rush of flame through the whole building spreading death and disaster—no fire protection available—the result was inevitable.

Tragic, isn't it?

Yes, it is tragic. It happens hundreds and even thousands of times each year.

You May Be Next!

What Causes Chimney Fires?

The accumulation of soot and carbon deposits in stoves, flues, fireplaces and chimneys cause chimney fires. Such deposits are a constant menace.

Ask Any Fire Chief

Don't Gamble With Life and Property

Remove this fire hazard before it brings disaster, like that pictured above, to *your* property.

It is a simple matter *NOW*. KILSOOT will clean up those danger spots quickly and efficiently.

No muss. No fuss. No need for the trouble and expense of mechanical devices or manual labor.

But if a neglected chimney does catch fire, just toss a package of

KilSoot

into stove, heater or fireplace and the vapors almost instantly formed, puts out the fire before ladders can be raised.

CHIEFS: We want to send you liberal samples of KILSOOT so you may confidently back up our advertising to the public.

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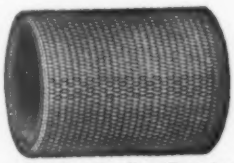
Quaker Fire Hose is made with a circular woven strong, tight jacket of the finest quality, and a specially compounded tube. It is durable and offers great resistance to high pressures as well as abrasions from rough handling in fire fighting.

First grade hose in every respect.



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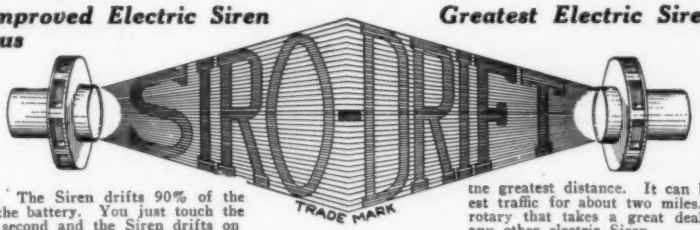
The New and Improved Electric Siren for Fire Apparatus

Greatest Electric Siren Ever Built for Fire Apparatus



SIRO-DRIFT

A Siren that will operate on one-tenth of the battery juice of any other electric Siren of its size. The Siren drifts 90% of the time without the aid of the battery. You just touch the Siren button for one-half second and the Siren drifts on for two or three minutes.

One-half second of current, applied means ten seconds running without any current, with plenty of noise—or two to three minutes at a slower rate of speed.

SIRO-DRIFT

Is 8 inches in diameter and gives the rising and lowering tones that carry the greatest distance. It can be heard through the thickest traffic for about two miles. Has a specially designed rotary that takes a great deal less power to drive than any other electric Siren.

We gladly ship a SIRO-DRIFT SIREN to any city on approval, transportation prepaid. Comes in three brackets—cross bar, on frame in front of radiator and under-the-hood.

Send at once for complete information

B & M Siren Manufacturing Co. LESTER H. MILES, *Owner* 929-931 South Main Street, Los Angeles, Calif.

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Right Prices
Prompt Delivery

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Thorough Weather Protection
Erick Sirens do not clog up. Snow and ice cannot enter and stop sounding rotor. Completely protected and sheltered from outside influences.

Features That Prove Supremacy

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Every telephone is a fire alarm station, permitting operator to sound alarm instantly, giving your fire department a chance to get the jump on the fire.

Universal Sound Projector
The Erick Sound Rotor and Deflector is built to instantly send a Fire Alarm.

Our Free Trial offer is made in all sincerity. We welcome your inquiry.

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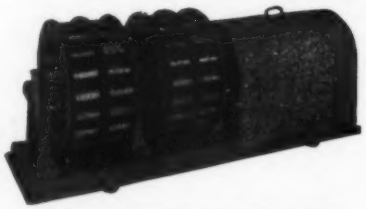
Manufacturer Siamese connections, fire hose couplings, plug connections, wrenches, etc.



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BI-LATERAL FIRE HOSE

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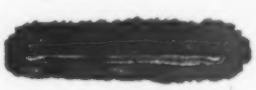
230 West Randolph St.,
Chicago, Ill.



The principal reason for the failure of fire hose before the Bi-Lateral construction was invented and why it had to be purchased so frequently by municipalities is because it was necessary to carry it in a flattened position.

The Bi-Lateral hose is made to flatten. This is why Bi-Lateral fire hose is guaranteed for six years instead of three.

When coupled with rocker lug couplings it makes a superior fire fighting line.

A Word to Our Readers:

DO you ever stop to think that every advertiser in these pages offers either a product or a service that has certain unique advantages which he believes will interest and be of value to you? Otherwise it wouldn't be worth his while to advertise.

Almost every page contains the offer of some product or service that you would find of value in your department. It will pay you to read the advertising pages as carefully as you do the editorial.

"The wise man is he who is always willing to learn." It will pay you to read the advertising pages carefully.

THE PUBLISHERS.

Today's the Time! Here's the Place!

To Get Complete Information!

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3 Acid Jars and Rings.
4 Aerial Ladders, Detachable.
5 Aerial Trucks.
6 Alarms, Siren, Electric.
7 Alarm Systems, Industrial.
8 Alarm Systems, Municipal Telegraphic.
9 Alarms, Theromostatic.
10 Asbestos, Clothing
11 Badges, Insignias, Buttons, etc.
12 Banners, Trumpets, etc.
13 Battery Jars.
14 Battery Zincs for Fire Alarm Batteries.
15 Bells, Fire Alarm, Municipal.
16 Body Equipments.
17 Boxes, Gongs, Reels, Registers, Fire Alarm.
18 Brakes, Air.
19 Brake Linings.
20 Brooms, Fire.
21 Building Materials, Fire Retardant.
22 Cable & Wire, Fire Alarm.
23 Caps, Firemen's.
24 Chains, Non-Skid, Fire Apparatus.
25 Chassis for Fire Apparatus.
26 Chemical Engines and Tanks.
27 City Service Trucks.
28 Coats & Suits, Firemen's Quick Hitch.
29 Combination Chemical & Hose Cars.
30 Cutting & Welding Equipment, Blow Torch.
31 Cutting & Welding Equipment, Electric.
32 Deluge Sets.
33 Door Openers, Fire Station, Automatic.
34 Extinguishers, Fire, Soda & Acid.
35 Extinguishers, Fire, Tetrachloride.
36 Extinguishers, Fire, Foam.
37 Extinguishers, Fire, Powder
38 Fire Boat Nozzle Equipment.
39 Fire Department Supplies, General.
40 Fire Drills & Organizations.
41 Fire Exit Devices, Door Opening.
42 Fire Alarm Posts.
43 Fire Escapes, Portable.
44 Fire Escapes, Rigid.
45 First Aid Equipment.
46 Flare Lights.
47 Flashlights, Hand.
48 Foam Liquid for Extinguishers.
49 Gas Masks and Respirators.
50 Gas & Smoke Helmets.
51 Gasoline & Oil Handling Equipment.
52 Goggles, Firemen's.
53 Helmets, Metal, etc.
54 Hose Carts, Reels & Racks.
55 Hose Clamps.
56 Hose Fire.
57 Hose, Chemical.
58 Hose Holders.
59 Hose Jackets.
60 Hose Standardization Tools.
61 Hydrant Draining Pumps.
62 Hydrants, Fire.
63 Jacks for Fire Trucks.
64 Jacks, Shoring & Prying.
65 Ladders, Fire.
66 Lightning Arresters.
67 Motorcycles, Fire Dept. Equipped.
68 Nets, Life.
69 Nozzles, Pipes & Misc. Brass Goods.
70 Packings, Pumps.
71 Pads, Pole Hole.
72 Paints, Fire Resisting.
73 Primming Ether, Motor.
74 Pumping Cars, Standard.
75 Pumping Cars, Foam.
76 Pumps, Fire Apparatus.
77 Pumps, Fire Service, Stationary.
78 Pumps, Portable, for Fire Protection.
79 Record Books, Fire.
80 Relief Valves.
81 Reviving Apparatus, Oxygen.
82 Rubber Clothing.
83 Searchlights.
84 Shingles, Fire Retardant.
85 Shirts, Firemen's Special.
86 Sirens, Apparatus & Chiefs' Cars.
87 Sliding Poles.
88 Soda & Acid Chemicals.
89 Spark Plugs, Fire Apparatus & Motorcycles.
90 Squad and other Auxiliary Cars.
91 Sprinkler Head Shut-Offs.
92 Sprinkler Supervisory Service.
93 Sprinkler Systems, Automatic, Foam.
94 Sprinkler Systems, Automatic Water.
95 Starters, Fire Apparatus, Automatic, Air.
96 Steam Fire Engines.
97 Tarpaulins & Fire Blankets.
98 Tetrachloride Chemicals.
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100 Tires, Fire Apparatus, Pneumatic, Solid, Cushion and Non-Skid.
101 Tractors.
102 Traffic Clearing Systems.
103 Triple Combination Pumping Cars.
104 Uniforms.
105 Water Towers.
106 Wheels, Cushion.
107 Whistles, Fire Alarm, Compressed Air.
108 Whistles, Fire Alarm, Steam.
109 Whistles, Fire Apparatus.
110 Wrecking Trucks.

Now is the time to get complete information on all new equipment you are planning to purchase for your department during the year.

Just run down the list of equipment, fill out the coupon below, and mail it to us with the numbers that indicate the equipment in which you are interested.

We will then notify reliable manufacturers of your interest in such equipment and request that without cost to you or any obligation they send you the information you desire.

They will gladly do this. So go to it! Ask for what you want. This page is for your convenience. Use it now—and whenever you decide to buy new equipment of any kind.

For Information on Any Equipment Not Listed, Write on This Page or Use Separate Sheet.

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225 West 34th St., New York City.

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Nos.....

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Name.....

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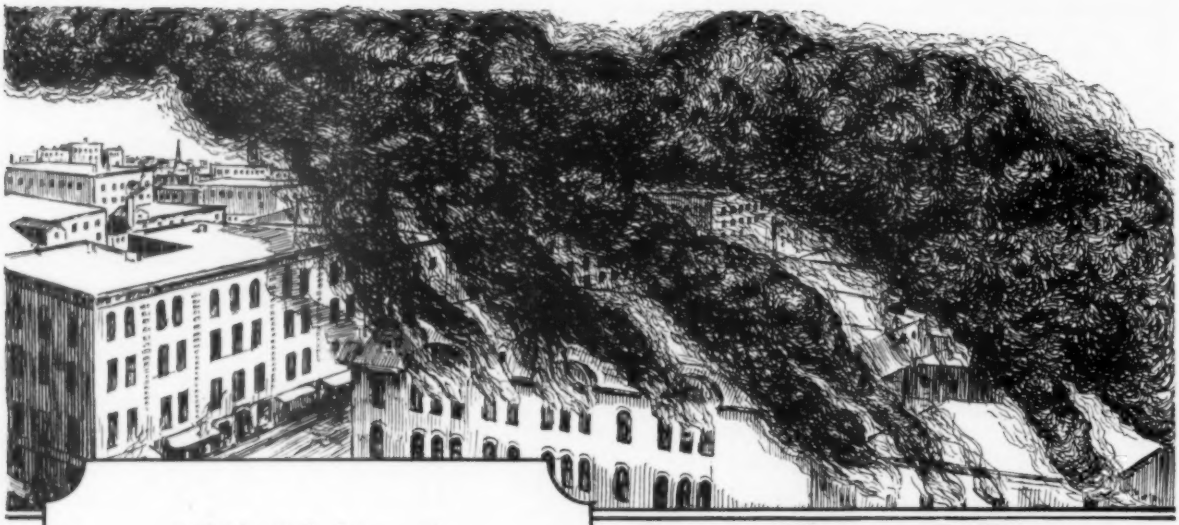

Philadelphia, Pa.

[JULY 9, 1850]

Philadelphia's most disastrous fire took place at this time. Fire was first discovered at four o'clock in the afternoon in a building located at 78 Delaware Avenue which was occupied for storage purposes. Feeding on the inflammable material in this building, the fire spread until the entire building was soon enveloped in flames. The flames reached some saltpeter, located in the building, which exploded with two terrific blasts, causing the wall to topple and throwing the sparks in all directions where they communicated the fire to a large number of houses.

At 4:30 P.M. a third explosion took place which was fatal to a number of men, women and children. A short time later there was a fourth explosion and people endeavoring to get away from the path of the conflagration trampled each other. Many jumped into the Delaware river to shield themselves from the bricks and cinders thrown by the exploding buildings.

At midnight the heavens presented a lurid appearance. Alarm bells were rung in every quarter and word passed that the furious element was sweeping everything before it. Building after building was wrapped in flames. The fire seemed to bid defiance to all human efforts. Early the next morning the flames were controlled and the city was saved.

This fire caused the deaths of thirty-nine people, injured one hundred, destroyed four hundred buildings and cost $1,000,000.

Great Fires of History

For many years American-LaFrance has been proving its worth to the citizens of the Quaker City whenever fire threatens. 122 pieces of American-LaFrance Fire Apparatus are now in Philadelphia's Fire Department. Consistent reorders prove the satisfactory performance of American-LaFrance in Philadelphia.

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ELMIRA, N.Y.

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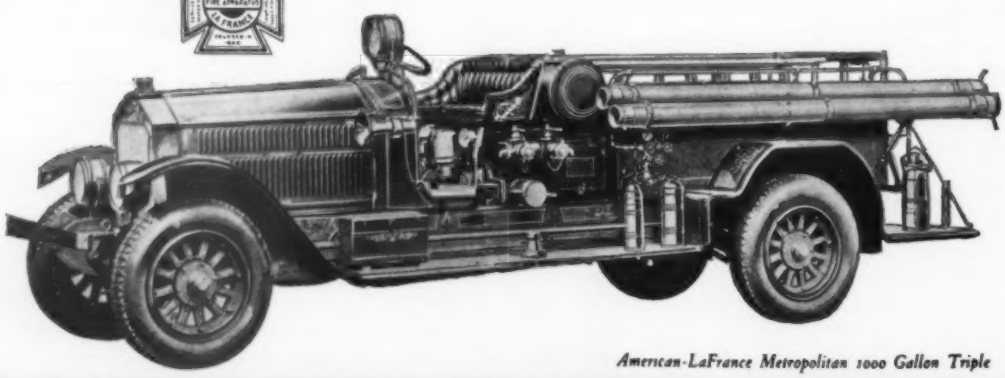

American-LaFrance Metropolitan 1000 Gallon Triple

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Special International engineering features make this truck a mechanical masterpiece. More than that—they give it the stamina to stand up on any job. Engine, frame, springs, clutch, transmission, brakes, chain or gear drive—every mechanical unit is built with a liberal factor of safety.

The International Heavy-Duty line ranges in capacity from 2½-ton up, and practically any requirement can be met with a chain-drive or double-reduction drive—whichever meets the owner's requirements best.

The International line includes the "Special Delivery" for loads up to ¾-ton; 4 and 6-cylinder Speed Trucks of 1¼, 1½ and 2-ton sizes; Heavy-Duty Trucks ranging from 2½ to 5-ton sizes; Motor Coaches; and McCormick-Deering Industrial Tractors.

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OF AMERICA
(*Incorporated*)
606 South Michigan Avenue, Chicago, Ill.

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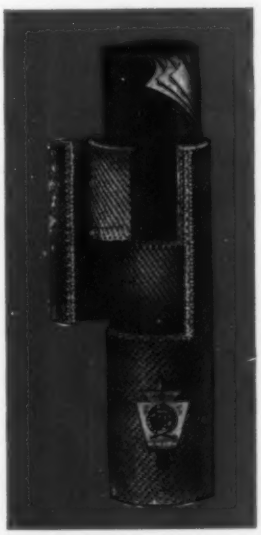
HARVESTER
COMPANY
TRUCKS

Where Fabric Fire Hose is made—Plant at Sandy Hook, Conn.

Why Buy Fabric Hose?

(Every Fire Official Should Read This)

BECAUSE we are so proud of the secrets used in its manufacture that we tell you all about them. Because our illustrated booklet "Wax and Para Gum Treated Fire Hose — How It is Made" explains many unique and really important points of advantage. Because it is a hose made to stand up under conditions that would make ordinary hose unserviceable in a fraction the time. Because it has a Loose inner tube, with its many advantages. Because it is absolutely impervious to moisture and will not mildew or rot. Because, in short, Fabric Fire Hose is light, pliable, compact, has great strength, is free from friction, kinking or twisting, and, Because it is the cheapest in the long run.



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